

THE
SOUTHERN AGRICULTURIST.

JUNE, 1833.

PART I.

ORIGINAL CORRESPONDENCE.

ART. XXXVII.—*On the Management of Slaves.*

[The following most excellent letter on the Management of Slaves, has been handed us, by the gentleman to whom it was addressed. As it was not intended for publication, and as we have not had an opportunity of communicating with the writer, we do not feel ourselves at liberty to affix the name. Suffice it to say that he is eminently distinguished as a planter, who practices what he communicates, and is peculiarly successful in all of his operations.]—*Ed. So. Agr.*

Dear Sir,—IN compliance with a request made by you some time the last winter, I now give you the plan I have adopted for the treatment and management of my negroes. I must first, however, apologize for the delay that has taken place. I assure you, in making this communication, I do it expressly to convince you of my willingness to afford any information in my power, solicited by my neighbours. I shall state to you, therefore, frankly, and as fully as circumstances will allow, the views which have governed me in laying down the plan I have pursued.

When I commenced planting, I was induced to believe, from the advice I received, that success depended more upon the judicious management of negroes than any thing else; and that in order to arrive at any good system of management, it was necessary,

First—That there should be a perfect understanding between the master and his slave.

Secondly—That certain rules should be laid down on the plantation, which should be considered fundamental rules, never to be deviated from, and which should be distinctly understood by all, and,

Thirdly—That there should be uniformity of conduct on the part of the master, who ought to exhibit considerable interest in the proceedings on his plantation, and an ambition to excel.

What I would mean by a perfect understanding between a master and a slave is, that the slave should know that his master is to govern absolutely, and he to obey implicitly. That he is never for a moment to exercise either his will or judgment in opposition to a positive order.

The rules I have laid down, and which are considered by all on the plantation, as fundamental rules, are:

1st. No negro shall leave the plantation at any time, without my permission, or in my absence, that of the driver; the driver in that case, being responsible for the cause of such absence, which ought never to be omitted to be inquired into.

2d. The driver should never leave the plantation, unless on very urgent business of the plantation.

3d. No negro shall be allowed to marry out of the plantation.

4th. No negro shall be allowed to sell any thing without my express permission.

I have ever maintained the doctrine that my negroes have no time whatever; that they are always liable to my call without questioning for a moment the propriety of it; and I adhere to this on the grounds of expediency and right. The very security of the plantation requires that a general and uniform control over the people of it should be exercised. Who are to protect the plantation from the intrusions of ill-designing persons when every body is abroad? Who can tell the moment when a plantation might be threatened with destruction from fire? Could the flames be arrested if the negroes are scattered throughout the neighbourhood, seeking their amusement? Are these not duties of great importance, and in which every negro himself, is deeply interested? To render this part of the rule justly applicably, however, it would be necessary that such a settled arrangement should exist on the plantation as to make it unnecessary for a negro to leave

it, or to have a good plea for so doing. You must, therefore, make him as comfortable at home as possible, affording him what is essentially necessary for his happiness—you must provide for him yourself, and by that means create in him a habit of perfect dependence on you. Allow it once to be understood by a negro, that he is to provide for himself, and you that moment give him an undeniable claim on you for a portion of his time to make this provision; and should you from necessity, or any other cause, encroach upon his time, disappointment and discontent are seriously felt.

If I employ a labourer to perform a certain quantum of work per day, and I agree to pay him a certain amount for the performance of said work, when he has accomplished it, I of course, have no further claim on him for his time or services. But how different is it with a slave! Who can calculate the exact profit or expense of a slave one year with another? If I furnish my negro with every necessary of life, without the least care on his part—if I support him in sickness, however long it may be, and pay all his expenses, though he does nothing—if I maintain him in his old age, when he is incapable of rendering either himself or myself any service, am I not entitled to an exclusive right to his time? Good feelings, and a sense of propriety would always prevent unnecessary employment on the sabbath, and policy would check any exaction of excessive labour in common.

Whatever other privileges I allow the driver, he is not suffered to send any negro off the plantation, unless he sends him to me, or some extraordinary circumstance arises that could make it proper that a message should be sent to a neighbour: for as his transactions are confined solely to the plantation, there rarely could exist a necessity to communicate elsewhere than with me. If he sends him for his own purpose, he is answerable for his absence, as the negro would be, did he go away without any permission at all.

I never give a negro a ticket to go from home, without he first states particularly where he wishes to go, and assigns a cause for his desiring to be absent. If he offers a good reason, I never refuse, but otherwise, I never grant him a ticket, and feels satisfied that no practice is more prejudicial to the community, and to the negroes, them-

selves, than that of giving them general tickets to go where they please. I am so opposed to this plan, that I never permit any negro to remain on my plantation, whose ticket does not authorize him expressly to come to it. I believe there are some who think that after a negro has done his work, it is an act of oppression to confine him to the plantation, when he might be strolling about the neighbourhood for his amusement and recreation. This is certainly a mistaken humanity. Habit is every thing. The negro who is accustomed to remain constantly at home, is just as satisfied with the society on the plantation, as that which he would find elsewhere; and the very same restrictions laid upon him, being equally imposed on others, he does not feel them, for society is kept at home for him.

As the driver is answerable for the good conduct of the negroes, and the proper application of their time, he ought always to be present to attend; otherwise he could never with propriety be charged with neglect, in which case all responsibility would be at an end.

No rule that I have stated, is of more importance than that relating to negroes marrying out of the plantation. It seems to me, from what observations I have made, it is utterly impossible to have any method, or regularity where the men and women are permitted to take wives and husbands indiscriminately off the plantation. Negroes are very much disposed to pursue a course of this kind, and without being able to assign any good reason, though the motive can be readily perceived, and is a strong one with them; but one that tends not in the least to the benefit of the master, or their ultimate good. The inconveniences that at once strikes one as arising out of such a practice are these:—

First—In allowing the men to marry out of the plantation, you give them an uncontrollable right to be frequently absent.

Secondly—Wherever their wives live, there they consider their homes, consequently they are indifferent to the interest of the plantation to which they actually belong.

Thirdly—It creates a feeling of independence, from being, of right, out of the control of their master for a time.

Fourthly—They are repeatedly exposed to temptations from meeting and associating with negroes from different directions, and with various habits and views.

Fifthly—Where there are several women on a plantation, they may have husbands from different plantations belonging to different persons. These men possess different habits—are accustomed to different treatment, and have different privileges; so your plantation every day becomes the rendezvous of a medley of characters. Negroes who have the privilege of a month ticket to go where they please, and at any hour that they say they have finished their work, to leave their master's plantation, come into yours about midday, when your negroes are at work, and the driver engaged, they either take possession of the houses in which their wives live, and go to sleep, or stroll about in perfect idleness, feeling themselves accessible to every thing. What an example to those at work at the time! Can any circumstance be more subversive of good order and contentment!

Sixthly—When a man and his wife belong to different persons, they are liable to be separated from each other, as well as their children, either by the caprice of either of the parties, or where there is a sale of property. This keeps up an unsettled state of things, and gives rise to repeated new connexions. It might be asked how does this rule answer when there are several men on a plantation, and few women, or *vice versa*, where there are several women, and few men. I would observe, it would be best to equalize the number of both sexes as nearly as possible. This can be done either by purchase or sale. For to adopt rules merely because they are good in themselves, and not to pursue a plan which would make them applicable, would be fallacious.

I never allow my negroes to sell any thing without my express permission. I never restrict them in any acts of industry, but reward them punctually for their exertions, by taking from them at a fair price whatever they justly have to offer. Where they have all the comforts they have a right to expect, regularly and carefully furnished them, they very readily and cheerfully submit to any such restrictions. I furnish my negroes regularly with their full share of allowance weekly. I give them annually their clothes and shoes, and every third year a blanket. I supply them with salt, and from time to time through the year salt-fish and tobacco. If a negro is suffered to sell any thing he chooses without any inquiry being made, a

spirit of trafficking is at once created. To carry this on, both means and time are necessary, neither of which is he of right possessed. A negro would never be content to sell only what he raises of either corn, poultry, or the like; but he would sell a part of his allowance also, and would be tempted to commit robberies to obtain things to sell. Besides, he would never go through his work carefully, and particularly when other engagements more interesting and pleasing, are constantly passing through his mind; but would be apt to put off his work for a future period, or slight it over.

That the general conduct of a master has a very considerable influence on the character and habits of his slaves, will be readily admitted. When a master is uniform in his own habits and conduct, his slaves know his wishes, and what they are to expect if they act in opposition to, or conformity with them: therefore, the more order and contentment exist. A plantation might be considered as a piece of machinery, to operate successfully, all of its parts should be uniform and exact, and the impelling force regular and steady; and the master, if he pretended at all to attend to his business, should be their impelling force. If a master exhibits no extraordinary interest in the proceedings on his plantation, it is hardly to be expected that any other feelings but apathy, and perfect indifference could exist with his negroes; and it would be unreasonable for him, who has the principal incitements, and is careless, to expect attention and exertion from those, who have no other interest than to avoid the displeasure of their master.

Whenever the season for hoeing begins, whatever tasks a negro commences with, are considered his throughout the working of the crop. Sickness sometimes produces a little variation in this plan, but to no great extent.—Where a negro knows that the task he is working, is to be worked by him the next time he goes over the field, he is induced, in order to render the next working as light as possible, to work it well as first. But where he is allowed to take his task indiscriminately as he comes into the field, there is always a great contention for tasks, each endeavouring to obtain the easiest to work. By that means great injustice and imposition arise. The fastest worker would always have the choice of tasks, and it is not always

the fastest worker who is the best worker. Instead of taking pains to do his work well, he hurries over it, to have the choice of the next task.

In the different departments on the plantation, as much distinction and separation are kept up as possible with a view to create responsibility. The driver has a directing charge of every thing, but there are subordinate persons, who take the more immediate care of the different departments. For instance, I make one person answerable for my stock of cattle, the plantation horses, the carts, wagons, ploughs and their tacklings. Another has charge of my boats; a third attends the dairy, the sick, &c.; a fourth, the poultry, and providing for, and taking care of the little negroes whose parents are in the field. Each of these negroes, however, do other work.

As good a plan as any I have found, to establish security and good order on the plantation, is that of constituting a watch at night, consisting of two or more men. They are answerable for all trespasses committed during their watch, unless they produce the offender, or give immediate alarm. When the protection of a plantation is left to the negroes generally, you at once perceive the truth of the maxim, "that what is every one's business, is no one's business." But when a regular watch is established, each in turn performs his tour of duty, so that the most careless is at times, made to be observant and watchful. The very act of organizing a watch bespeaks a care and attention on the part of a master, which has the due influence on the negro.

ART. XXXVIII.—*On Hedges*; by Dr. JOSEPH JOHNSON.

(Read before the Horticultural Society, May 8, 1833.)

I beg leave to offer a few observations on hedges, or live fences.

The scarcity and cost of good materials for timber-fences, has led to the practice of commencing inclosures with a ditch and bank. This practice, however proper

for economy, and the preservation of the wood, is the worst that can be for the propagation of live fences. The ditch drains the adjacent earth, so as to exhaust all the moisture requisite for the nourishment and growth of the tender young cuttings or sets; and the bank, instead of supporting, impoverishes them. The chief cause of protracted growth—of difficulty and disappointment in all hedges—in all countries, is the ditch and bank.

The next great difficulty arises from the grass and weeds, which are suffered to grow with the young plants, and of course to exhaust the sustenance, more essential, at this time, to their growth; because of their having, as yet, but few and feeble roots for their support.

1st—It is therefore recommended to commence the planting of a live fence in October or November, when the grass ceasing to grow, would not injure the young plants for the first six or seven months.

2d. That every such hedge, should be sheltered by a fence or inclosure for three years, until the plants shall have acquired strength to support themselves, and bear the injury usual from cattle.

3d. That the ground be well prepared by ploughing or hoeing, a space at least four feet wide.

4th. That the plants or cuttings be set out from six to eight inches apart, in two rows, distant from each other about two feet. If seeds be sown, they should be nearer to each other in each trench, to allow for failures.

5th. That the weeds and grass be carefully kept down for two years, by some one no longer valuable for field labour, working with a light narrow hoe.

6th. That all hedges be plashed or wattled as soon as the plants are about five feet high.

7th. That no tree of any description, be suffered to grow within thirty feet of any hedge.

The practical advantages of fencing with the Non-descript or Cherokee-rose, have been forcibly presented to the public, by the late Mr. Stephen Elliott, and Mr. R. E. Rowand. If a hedge be made of this, it will require to be trimmed freely with hooks, to prevent it from growing so thick, as to afford shelter for rabbits, rats, &c.

But I would suggest the use of other plants for hedges, some of which may be found worthy of attention, in different situations and circumstances. The daily rose (*Rosa*

Camina) is very easily propagated by cuttings, layers and seeds. It is a hardy, vigorous plant, and in two or three years acquires sufficient height and strength to be useful, especially if plashed as all hedges should be. It is preferable to the Cherokee-rose, in this respect, that while it acquires a sufficient growth as early, it never grows beyond what is necessary, nor imposes the expense or trouble of frequent dressings. For ornament, it is, at least, equal to the other.

The Pomegranate is very easily propagated from cuttings or suckers at all seasons of the year. I do not know any plant which takes root with more certainty. The wood is tough and durable, grows promptly to a sufficient height and never exceeds what is proper.

The Oranges, either sour or sweet, when sowed in trenches, would acquire sufficient growth in two or three years, and no animal would be so daring, as to attempt a passage through its impenetrable barrier. In this way it would bear the frost much better, than in detached stems, and would not grow either so high or so large as when more open and widely spread. It would probably be found in the Southern States, as useful as the well-known Lime-hedges of the West-Indies. The seeds of the Sweet Orange, may be obtained in great abundance from the decayed oranges, at the fruit shops.

The Burning Bush, (*Pyracanthus*) for this suggestion, I am indebted to my friend Mr. James Nicholson, who has already set out a hedge of this beautiful plant, with the most favourable prospects of success. It is not only ornamental, but bushy and thorny, not exceeding the proper height for a hedge, and can scarcely fail of being valuable.

The Cassina, (*Ilex Cassina*) if not too familiar, would be highly prized for its beauty and durability, as an ever-green hedge. When once plashed, it would not require to be repaired or trimmed for many years, if ever. To please the eye and give it the uniformity of level and surface, expected near a residence, it may be occasionally drest, but not of necessity.

The Slow or Black Haw, (*Viburnum Prunifolium*) one of the prettiest of our many native shrubs, and one of the first to unfold its beauties in the spring, may be propa-

gated from the seeds, or from suckers and layers, or by transplanting from the woods.

The Haw Thorn, (*Cratægus Parvifolium*) which is found in such abundance in all our old fields and commons, may be transplanted or raised from seed. It is slow in its growth, but not so slow as the Black Thorn of Europe. It is equally certain and effectual in forming a quick-set hedge.

The Crab Apple, (*Pyrus Coronaria*) is one of the most fragrant and ornamental of plants; its growth is slow, after having acquired the ordinary height of a fence, and it may be propagated with great ease from seed. It may likewise be transplanted, but is said to require much care and attention to preserve it.

On the subject of transplanting, suffer me to digress, for the purpose of reminding some and suggesting to others, that the success of this process may be greatly promoted, and rendered almost certain, by dividing the long horizontal roots of every plant or tree, that you wish to remove, at least a month or two before you contemplate such removal; and, if possible, while the plant is still vigorous in its summer foliage. The object of this early digging round the plant, is to give the opportunity and impose the necessity, for it to throw out numerous fibrous absorbing roots, to supply the nourishment, of which it had been deprived, by destroying the horizontal roots. While the tree remains in its native position, this can be readily done in a month or two, but without this precautionary measure, it is exposed to death, before it can obtain sufficient nourishment by means of new roots. Again, I would recommend, that leaves, pine-trash, or moss, be thrown round the roots of plants newly set out, for the purpose of preserving an equal temperature, protecting them from the exhausting, scorching influence of the sun, preventing the growth of grass and weeds, and retaining moisture about the roots.

A difficulty may be supposed to exist, in making an entire inclosure, by the impossibility of propagating high-land plants, where the fence should pass through a piece of low ground. Shall the hedge be interrupted in such situations, where of all others, the rail or common fence decays most rapidly? I think that it need not be interrupted by such a circumstance. I am confident that na-

tive plants may be found, well adapted to fencing in such situations. I suggest that the Hazel or Pond Spice, (*Laurus Geniculata*,) may be transplanted from ponds, and become a permanent fence. The Willow is always at hand in such situations, and there can be no doubt of its success. The Wild Rose, (*Rosa Corymbosa*) and Bramble, (*Rubus Villosus*) may be transplanted, separately, or together, on a bank run in the line of fence, and soon become impenetrable. The Tamarisk, which has a wonderful facility in adapting itself, to all descriptions of soils, may be tried, particularly where such grounds are occasionally overflowed by salt-water, and where the line of fence may terminate at some creek or other stream of salt-water. The China-Briar, (*Smilax Chinæ*) and Green Briar, (*Smilax Peduncularis*) the Supple Jack, (*Zyzyphus Volumbilis*) the Cross Vine, (*Bignonia Crucigera*) and the other vines which grow luxuriantly in swampy places, may be transplanted with ease. The Whortle Berry, (*Vaccin, Staminos^m*, and *Frondos^m*,) the *Aster Caroliniana*, the *Kalmias*, *Andromedas*, *Rhododendrons*, and *Azalias*, may contribute to extend and adorn the inclosure. The Farkle Berry, (*Vaccin^m Arboreum*) may be planted and transplanted in fencing through a piece of pine barren, where it might be difficult to succeed in propagating other shrubs.

It may be expected that I should offer an opinion as to the relative advantages of these plants for hedging. I acknowledge that I have not sufficient experience to decide any such question. If a garden is to be hedged, I might prefer the Burning Bush and Daily Rose. If a lane near my house, I probably would set out Crab Apples and Pomegranates alternately, twenty or thirty feet apart, and fill the intermediate spaces with evergreens, such as the Cassina, Holly, Orange, Olive and Arbor Vitæ.* If an avenue be wanted on an inclosure for a farm, I might prefer the Slow and Haws, with intermediate tufts of Cherokee-rose, Tamarisk, Crab Apple, or other ornamental plants. But such selections will be directed by the greater taste and experience of different persons, or by the greater facilities enjoyed for obtaining either or all, of the different kinds of

* I have lately heard that Mr. J. Lucas and Mr. Thomas Bennett have perfected beautiful evergreen hedges of the Arbor Vitæ—and adopt the idea from their experiment: I have since also learned that Mr. Landreth, of Philadelphia, had such a hedge three years old in the year 1831.

plants. If a permanent fence be wanted for a pasture or other inclosure, what can be wished for more speedy, more certain, more durable, and less troublesome, than the common Plum of the country? (*Prunus Umbellata*,) the Winter Plum, (*Prunus Hiemalis*,) and the Pig Plum, (*Prunus Chicasa*,) may be likewise used. A mixture of the three may be preferable to the use of either singly, as they blossom at different seasons of the year, and thus render the hedge more ornamental. They need not ever to be trimmed or dressed. Let them only be plashed, and the work is done. The fence will be impenetrable and almost everlasting.

The mode of plashing a hedge, being probably unknown to many of the Society, I herewith present both a drawing and a model; hoping thereby not only to be better understood in my endeavour to describe it, but that a stronger impression of its facility and advantage, may thereby be made on the minds of the members. Plashing is done, by preserving in an upright position, every fourth plant, in the line of your hedge, and bending the intermediate plants to an angle of forty-five degrees, by means of a slight notch near the earth, so as to be wattled and interlocked with at least two of the upright plants. The tops are then attached by a thread, vine, or piece of bark, to the top of each upright plant, until the growth of branches interlocking each other, renders the intertie unnecessary. In the Orange, Rose, and Thorn, it is probably unnecessary to secure the tops to each other. If in its proper place, the upright plant be too small or otherwise defective, a stake of cedar or other durable wood, may be used in addition to and in support of the young plants. The notch or incision near the root of the bending plant, does not injure its growth, but generally causes a growth of suckers from the part, which thickens and improves the hedge. When the stems or trunks grow too stout, or when it becomes requisite to increase the mass or bulk of the hedge, it can be done, by cutting the trunk half through near the root: an abundant growth of suckers will ensue, and if necessary, the trunk may then be removed altogether. Plashing has unfortunately been spoken of by writers on this subject, as applicable only to old and decayed hedges, and even then with doubts of its advantages. I think that these doubts arise altogether, from delaying to

plash until the hedge is decaying, in which situation all expedients would be at least doubtful in restoring its strength. But if practised when the plant has acquired its proper height and strength, there can be no doubt of the benefits.

The want of fencing materials on some of the most valuable plantations in the State, has become a serious evil within the last thirty years. The very general destruction of the long leaf Pitch Pine, (*Pinus Palustris*) about that time by insects, has left the planters, near the sea-coast, under great difficulty in keeping their inclosures secure from year to year. The Loblolly Pine, (*Pinus Toeda*) decays so rapidly, that it is scarcely worth the trouble of splitting and carting.

If any of these suggestions should be deemed worthy of attention by gentleman owning property in this or any other Southern State, the result of their experience is respectfully requested for the benefit of all. I should feel as much pleased in finding my speculations corrected by the judicious experiments of practical men, as in hearing that they had been tried and approved.

ART. XXXIX.—*Remarks on the Culture of the Camellia Japonica, Pæonias, Chrysanthemums and Dahlias; by*
ALEXANDER GORDON.

Dear Sir,—When I sent you my last communication, I was not exactly aware whether floriculture was yet deemed of sufficient importance in the South, to render a few remarks on the subject worthy of a portion of your valuable pages; but, I have just been favoured with a perusal of the September number, in which I perceive the Horticultural Society of Charleston purpose awarding premiums for the best specimens of plants and flowers which may be

exhibited previous to the anniversary of July, 1833. This encourages me to continue my brief remarks on such plants, as I consider adapted for your climate and worthy of cultivation. I beg leave to say with one part of the premiums offered I am highly gratified, viz: for the most beautiful flowering or ornamental *indigenous cultivated* plant, bulb, and flowers. This is highly laudable and commendatory. By directing the attention of the inhabitants to those rich treasures with which they are surrounded, a new source of gratification is opened to them, nature will at every footstep present her varied charms, and her admirers will find themselves enchanted beyond description by productions hitherto heedlessly passed, or but indifferently observed. But I did not intend to write on the Flora of South-Carolina. I wish to add to it, the beauties of other climes, and having selected a few genera of much admired plants in my last, I now follow the same plan in this communication.

The *Camellia Japonica*, belonging to the class and order *Monadelphica polyandria* of Linnæus, and the natural order *Camellie* of Jussieu is one of most beautiful tribe of plants in the world. This species belongs to the same genus with the plant which furnishes the celebrated and universally known herb, *Tea*. Some botanists have made it a distinct genus *Thea*, (from Tcha, the Chinese name for tea.) The *C. Japonica* is a lofty tree in its native country, and wherever it is known it must command admiration from its beautiful form, richness of foliage, and brilliancy and delicacy of its various coloured flowers. There are an immense number of these plants now in the London collections, where a great variety of new and splendid sorts have been originated. They are all peculiarly adapted for the open air in your climate, and I hope the period is not far distant when every garden in the cities of Charleston and Savannah, will contain several varieties of these beautiful plants. In the garden of my friend, Mr. Noisette, at Charleston, there is an extraordinary fine specimen. On which he should, by all means, engraft the various other sorts, which would, in a few years, present one of the most beautiful of nature's lovely sights. I also, last winter, saw a superb double white and double striped, with various other smaller sorts, in the garden of Lewis Le Conte, Esq. Liberty County, Georgia, which for healthi-

ness and abundance of flowers, surpassed any I have ever seen before, convincing proofs they will succeed well in your climate.* In England and in the Northern States of the United, the propagation of the *Camellia* is rather a tedious process. The single red is propagated by cuttings, layers, or seeds for stocks, and on them the finer sorts are inarched, budded or grafted. A loamy soil and vegetable mould is the best adapted for the *Camellia*. They ought to be planted in the shade as they do not do well directly exposed to the sun's rays.

Pæonia—A genus of magnificent flowering plants, particularly the Chinese species and their varieties. Also that of *Officinales*, a native of Switzerland, and its numerous offspring; but, in fact, they are all very superb, having large showy flowers, and are easy of propagation—by dividing the roots of the herbaceous species and varieties, and by ripened cuttings, or the whole stem laid down and ringed of the *tree* or *moutan*, with its most magnificent varieties, *papaverace*, *Banksia*, and *rosea*. This genus belongs to the class and order *Polyandria digynia* of Linnæus and natural order *Ranunculaceæ*.

Chrysanthemum Sinense—A fibrous rooted perennial plant, a native of China, from whence the London Horticultural Society have within these ten or fifteen years obtained many splendid varieties. It is a plant becoming a universal and deserved favourite, being highly ornamental and flowering at a season, (autumn) when other plants have decayed. It is of the easiest culture; all that is required being merely to divide the roots in the spring, or propagate by cuttings, which is the preferable plan for producing handsome plants. Only a few stems should be left on the plant, say one, three, or five, (three the preferable number) if more, the flowers will be diminutive. Any soil will answer for the *Chrysanthemum*, if of a loamy nature. It belongs to the class and order *Syngenesia Superflua*, and the natural order *Compositæ*, as do also the genus.

* Query—Then why not give the Tea-plant a fair trial.

Note.—It has been done, the Tea plant has been growing in the open ground at Mr. Noisett's nursery for several years, and withstands the severity of our winters without protection.—*Ed. So. Agr.*

Dahlia, or Georgina.—This genus is a native of Mexico, and from the beauty and diversity of its flowers, it is now highly valued in every English garden. The colours and shades of their large showy flowers are endless. It is of the easiest management, very much resembling in its cultivation the *Solanum tuberosum*, or *Irish potato*, as that root is called in the United States. As soon as the frost has blackened the tops, the roots are taken up and spread in a dry cellar, or such place as they will be safe from the frost. They require to be tied to strong stakes, as they are very apt to break down by high winds; let the branches hang loose (but firmly secured to the stake) that they may have full liberty to display their flowers boldly to the view. Only allow one stem from the root, as the flowers will be much larger and finer. Divide the roots in the spring, and plant from three to four feet apart.

I add the names of some choice plants, shrubs, &c. well worthy of your attention, and respecting the cultivation of which, or any other plant, it will afford me the greatest pleasure if I can convey any information to you or your readers,

Yours, respectfully,

ALEXANDER GORDON.

Nerium Oleander, } and var.
 ——— odora, }
Verbena melindres,
Petunia nyctaginiflora,
Trevirana coccinea,
Fuchsia—all species,
Aloysia citriodora,
Alonsoa linearis,
Althæa rosea,
Aucuba Japonica,

Ribes sanguinea,
Bouvardia triphylla,
Brugmansia arborea,
Buddlea globosa,
Malope trifida,
Escholtzia Californica,
Lobelia fulgens,
Agapanthus umbellatus,
Kerria Japonica,
Pyrus Japonica.

Rochester, (N. Y.) Sept. 21, 1833.

ART. XL.—*Account of an Agricultural Excursion made into the South of Georgia in the winter of 1832; by the EDITOR.*

(Continued from page 252.)

From "*St. Simon's*" we again visited "*Hopeton*," touching on our way at "*Butler's*" and "*Champney's Island*," both of which are of considerable size, especially the latter. The crops cultivated are rice, sugar-cane and cotton, the first is principally attended to, the two last being only in small quantities, so as to alternate a portion of the fields and also to ensure some return for the labour expended on the plantation which is best secured by a variety of crops, especially where they are all valuable. Most of the river plantations near Darien are better calculated for the culture of rice than any other crop, especially the islands, yet a rotation is generally adopted, and by many is thought necessary to ensure a full crop of rice. A distinguished planter of that place gave it as his opinion, based on the experience of many years, that in the course of ten years nothing was lost, by introducing a crop of cotton every third year, even were the cotton to prove wholly unproductive, for the increase in the rice crop would fully compensate for the lost year, so that at the expiration of ten years, the product obtained of rice, would be equal to what it would have been, had the fields been kept solely under this culture. The cotton crops, therefore, are considered as clear gain. The rice-planters of South-Carolina have not, we believe, introduced any other crop on their fields, owing to the greater value of this over any other which they could cultivate; but, if in the course of years, the product remains the same, although every third or fourth year is devoted to another, it would be worthy of trial whether a rotation of crops might not be advantageously adopted. An experiment of this kind might be made on a small field, or a square be devoted to this purpose. This alternation of crops, however, is not considered *by all*, to be necessary to the successful culture of rice. Some believe that it can be done without, and others adopt it as a convenience.

Col. J. F. Green is of opinion that it is not necessary, he observes:—"There can be no doubt but an alternation

‘of crops where it can be practised conveniently is highly
‘judicious; but I do not think it at all necessary to ensure
‘a good rice crop, if fortunately situated between the two
‘extremes of salt and freshets. From the approximation
‘we can make between harvesting and planting in placing
‘the land nearly in the condition we should find it, after
‘raising cotton, cane, or any thing else that required to be
‘kept dry through the entire season, by having the fields
‘properly ditched and ploughed, and kept dry from har-
‘vesting to planting. These are two necessary precau-
‘tions that are little observed in this neighbourhood, more
‘particularly, perhaps, that of ploughing.”

A few of the planters have of late years planted entire crops of rice, on account of the uncertainty of realizing a full crop of cotton from low lands. Some have substituted cane in lieu of cotton; but we did not find the culture of this plant extending. In fact, several planters were about abandoning it, in consequence of its requiring more labour in planting, harvesting and preparing it for market. Also the additional expense necessary to erect an efficient mill for grinding the cane, and building sugar-houses, &c. A majority of the rice-planters, we understand, who cultivate the cane, prefer making syrup to manufacturing sugar, believing it to be more profitable, owing to the want of season to mature the cane, and the inefficient machinery for grinding the cane.

Some of the planters with whom we conversed were of an opinion, that the cane crop on low land was not as valuable as the rice crop, the product being small and the quality inferior. Mr. J. H. Couper has proved it to be otherwise, and both cane and cotton enter into a regular rotation on his fields.

The mode of cultivating rice in this neighbourhood will be best understood by giving the practice of one or two of the planters. We will here give that of Col. Green, who cultivates an island immediately opposite to Darien, from which it is separated by one of the branches of the Alata-maha river. These notes were furnished us by Col. Green, merely for reference, but as we cannot improve the account which he has himself given, we prefer making use of them as they are, rather than by altering, lose any part.

“The island on which I plant is known as “*General’s Island*,” and contains about eight hundred acres of tide land. I have now under cultivation about two hundred and twenty acres. My negroes are settled on the main, from an impression that a low damp situation was not as congenial to health as a higher and drier site; and where better water could be procured for use, and, also, that there would be nothing risked by gales which do at times not only sweep off entire crops, but a large portion of the negroes. There is some risk to be run in daily crossing the river, and occasionally much exposure to rain; but of the two hazzards, I prefer the latter.

“I prepare my land by having large and tight banks and tight trunks, and as soon as possible thoroughly drain, putting my drains parallel with each other, at fifty feet apart, from fourteen to eighteen inches wide, and not less than three feet deep. The inequality of the surface is generally so great that a drain shallower than that, will not dry the lower spots sufficiently. I think it important also that the ditches and drains should be perfectly straight, and all stumps and roots perfectly removed so as to present no point on which floating trash may hang, otherwise barriers will soon be formed. When my fields are dried for harvesting, they are generally kept dry until again planted; the stubble will die with less cold, and more effectually when kept dry, than if suffered to be kept wet or even damp. As soon as the stubble will burn, fire is applied to it, and burnt as perfectly as possible; the earlier it is burnt the more numerous the birds are likely to collect on the fields, and in many instances the ducks also; and pick up what scattered rice may then be left on the surface, as it is perfectly exposed. I think it best to prohibit the pasturage of the fields to all horned cattle and horses. Rice-field butter is certainly very fine, but it is purchased at an extravagant price. The plough is introduced when the roots are sufficiently decayed to admit its use, (the Free-born or Dagon plough I find best) and the land is as perfectly turned as possible three or four inches deep; by which process, the rice which has escaped the birds is so late in getting up that it rarely ever overtakes the crop, and your crop invariably comes up free from grass. Some short time previous to planting, a heavy harrow with good iron

‘teeth is passed over the ploughed land once or twice,
‘until it is reduced sufficiently fine for trenching. I fre-
‘quently use the trenching plough, but prefer the hoe, as
‘it is neater in its execution; but the plough despatches
‘work rapidly where you open three rows at once. I pre-
‘fer my trenches shallow and not exceeding five inches
‘wide, and about fourteen inches from centre to centre.
‘In land thus prepared two bushels of seed is quite enough
‘to the acre; in land not broken up by the hoe or plough,
‘or on new land that is rough it requires to be planted
‘thicker, say two and a half to three bushels per acre. I
‘then flow from three to seven days, at first as deep as I
‘can, to float the trash which should be taken off as quick
‘and as clean as possible, the water is then reduced down
‘so as to protect the higher spots of the field from the
‘birds. The field is dried as soon as the rice is perceived
‘to have sprouted pretty well, which never exceeds seven
‘days, unless the weather proves very cold, but in no case
‘ought it to be kept flowed deep, long. I have seen whole
‘fields of rice entirely rotted by deep flowing. This flow
‘serves the double purpose of cleaning the field of small roots
‘that may have been ploughed up, or particles of stubble
‘or grass that have escaped the fire, and destroying in-
‘sects that prove sometimes very destructive to a young
‘crop. I disapprove of the point-flow, except under pe-
‘culiar circumstances; if the birds are very troublesome
‘and the land very level, the rice may be protected a few
‘days from the birds, in the point. If the land should
‘be unlevel, I think that more is sacrificed by this flow
‘than would be lost by the birds. On the poor black soil
‘that is frequently found on the main, adjoining the high-
‘lands, and which is invariably level, and from its peculiar
‘soil, is very difficult to dry when once saturated, I would
‘always advise the point-flow and to be continued on from
‘twenty-five to thirty-days, the rice by that time attains
‘considerable size, and most generally the field is perfect-
‘ly clear of grass. The rice on this quality of land is less
‘likely to become diseased by fox, rust, or spot, under this
‘mode of treatment, than giving, what is termed, the long-
‘flow, at the usual time. It will then require to be kept
‘dry and hoed until it has formed the ear.

“But to return, as soon as I am done planting and the
‘rice is up, I commence hoeing—at that period the work

'is light—the rice is so small that it must necessarily
'be hoed shallow, and there is no grass, and generally
'but few weeds to pick out of it, at that early season.
'Every tolerable good hand is able to hoe a half acre with
'ease. I prefer to hoe twice before I flow, if I have time.
'This depends also much on the tides, as lands that are not
'old and much worn cannot be flowed generally but on
'spring-tides. This is known as the long-flow, and the
'use of it requires as much or more discretion in the
'planter than any other point in the cultivation of the
'crop. When the water may be changed in eight or ten
'days, and the atmosphere is moist and calm, it will flourish
'for thirty days; but if on the other hand, the weather
'should be dry and cool, and the tides too low to allow a
'change of water on the fields, I have seen the plant
'show indications of disease in ten days. I would recom-
'mend under such circumstances, to dry the field and hoe
'deep and thoroughly as soon as the land is sufficiently
'dry. The object is to keep the plant in as healthy and
'growing condition as possible. Hence it becomes neces-
'sary to change the process of culture with it—if disease
'appears while it is dry, flow, or if when flowed, dry.

"As a general rule, the long-flow is kept on from fifteen
'to twenty days. I prefer flowing shallow unless the fields
'had not been properly cleared of trash in the previous
'flow, or it should have become much infested with weeds
'previous to hoeing, in such a case the water should be put
'on deep to float the trash or weeds, but under no circum-
'stances ought it to be suffered to remain under this deep
'flow beyond three or four days. Whilst the rice is under
'this flow, it is advisable to have the higher spots in the
'field hoed and picked clean of grass. The first hoeing
'after this flow should be given as soon as the land is suffi-
'ciently dry, which, if properly drained, will not require
'more than a week, and be hoed deep, not less than two
'or three inches, and the surface well broken—care should
'now be taken that all the grass be perfectly removed.
'One-third of an acre is a pretty fair average for a hand
'per day to hoe at this time. If time admits, the crop
'should all be hoed over again, but hoed shallow, and
'what grass escaped at the previous working must now be
'removed; this is termed the "*lay-by hoeing*," and is light
'labour—a half to three-quarters of an acre per hand per

‘day. The crop is now supposed to be made, and requires
‘nothing more but to be flowed and the water changed as
‘convenient. The interval between the two last flowings
‘is generally about six weeks, and by the time the rice
‘has received this last flow, it has formed two, and if well
‘grown, three joints. This flow should not be deeper
‘than the long flow, until the rice ears out, it is then
‘advisable to flow deep to support the plant and keep it
‘from lodging or falling. Seven acres of rice may be
‘cultivated to the hand, if on a good pitch of tide, when
‘once properly ditched with the assistance of ploughs and
‘harrows to aid in preparing it for planting, or five acres
‘of rice and two acres of provision, and unless the propor-
‘tion of potatoes should be very small, I would prefer the
‘seven acres of rice as the lighter labour.

“The crop of rice, as an average crop for the entire rice-
‘growing-country, is greater than in South-Carolina per
‘acre, from the comparatively large amount of new land,
‘and the system of alternating the fields, but the amount
‘planted per hand is small compared with the usual amount
‘planted in South-Carolina, it does not exceed four acres,
‘and in many instances, is much below it. The mode of
‘planting and culture also differs widely from that pursued
‘in South-Carolina, the rows are wider apart, say eighteen
‘inches from centre to centre, and I believe never exceed-
‘ing one and a half bushels of rice, planted to the acre,
‘and I believe five pecks per acre is about the medium.
‘Very little water is used in cultivating the crop previ-
‘ous to its jointing, and never, as far as I am aware of,
‘used as an agent to destroy the grass; this renders it
‘necessary to hoe oftener, and adds to the labour of keep-
‘ing the crop clean; and I believe deteriorates the qua-
‘lity of the rice. I would estimate the average rice-crop
‘of this neighbourhood at fifty bushels per acre. I am
‘perfectly aware that many persons will doubt this as be-
‘ing too low an estimate; be it so, I will then, to convey my
‘idea, say it is twenty per cent. greater than is made usu-
‘ally as an average crop on Sam-Pit, Black River, Pee
‘Dee, or Waccamaw. I know the proneness in planters
‘and overseers to over estimate the real amount of their
‘crops. I do not think that more than forty bushels per acre
‘is made on an verage on those rivers. Here and there
‘a solitary planter makes sixty bushels per acre, or occa-

'sionally a solitary field may make it; but that would not be a fair estimate of the average crop of the district for 'a succession of years.'

The management of this crop on "*Butler's Island*," has already been given in Vol. i. p. 409 of this Journal, and we refer our readers to it for further information. In our account of "*Hopeton*," we will give the mode of culture pursued by Mr. J. H. Couper, which with what we have already given will convey a tolerable correct idea of that pursued by the planters generally in this section of country. Although there are many islands in this river, and the borders are swampy, yet, there is, comparatively, but a small portion, which is well adapted to the culture of rice. The right pitch of tide does not extend more than three miles, commencing at "*Hopeton*," and terminating with "*Champney's Island*," above the former the crops would be extremely uncertain from the liability to injury from freshets, and below "*Champney's Island*," the salt-water would occasionally prove an unwelcome visiter. But even the whole of the space between these two points is not occupied, and there is much fine land yet to be brought under culture. The river here is very wide and divided into several large branches. Most of the islands are still in a state of nature, thickly wooded, and apparently of great fertility; but they are all more or less liable to be overflowed by freshets, for although the river has numerous large branches and several out lets, yet owing to its great length, and the tributary streams which flow into it; freshets are not uncommon, and are sometimes very destructive.

A peculiarity we noticed here, and which is common in this State, is to regulate all the operations of the rice crop by the spring tides. All of their work is done in reference to these, whether it be planting or hoeing, for it is only at these periods that they can flow their fields; consequently, if they are not prepared, they must wait for the next. They, therefore, endeavour to have certain portions of their work completed by that time—certain fields planted, certain fields hoed, &c. There is not, (owing to this cause) all the precision which is to be found on the Carolina plantations, nor can science be as effectually brought to aid the planter, for whilst with the Carolina planter, each operation is governed by the particular state of the crop, and water is put on or run off as

may be required, the crop hoed, and kept dry, or flowed, as may be thought most conducive to its health, the Georgia planter is obliged to wait certain periodical flowings of the tides, which must operate against him in some degree, although, he can regulate his work to meet them in most cases, as these intervals are short. The average product of rice per acre on this river is greater than in Carolina, owing to the causes stated by Col. Green. We heard of several instances of four barrels being made to the acre.

(To be continued.)

ART. XLI.—*Observations on the Culture of Kohl Rabbi, Celeriac Flowers and Dahlias; by CHRISTIAN BREIGHTHAUPT.*

“ Mount Vintage, (S. C.) April 21, 1833,

Dear Sir,—I received a few weeks ago from Saxony, a parcel of flower and garden seeds, and with pleasure send you some of them by stage, (or a stage passenger) which I hope will arrive safe.

It will be hardly necessary to remind you, that at this season of the year, the seeds you may sow must be protected from the influence of the sun and heavy rains, before and for some time after they are planted out.

I have cultivated the Kohl Rabbi for a great number of years with considerable success, I consider it an excellent vegetable, and ought to be planted like cabbages, at the distance of fifteen or eighteen inches. In order to get good seed, it ought to be taken up in November, and after a few days be set out in trenches, leaving a few top leaves out of the ground, which in frosts must be covered with straw, bushes, or planks.

The turnip rooted Celery, (*Celeriac*) is also a very superior vegetable restorative. In Germany and Italy, the root is par-boiled, then cut up in thin slices and eat warm

with drawn butter, or cold with oil and vinegar, as a salad. Before it is sown the seed ought to be soaked for two or three days in water, close to a warm place, and scatter them in a rich bed of earth, (fresh manured ground must be avoided) it ought not to be transplanted until it arrives to the size of a small cabbage plant. I take this opportunity of observing that it would facilitate gardening very much, if the seeds pretty generally were soaked until they swell perceptibly, then dry them a little before they are put in the ground; they will certainly vegetate much quicker, and get ahead of the weeds. It is particularly applicable to asparagus, the melon tribes, radish and cabbage seeds—the only precaution which it requires is, that in a dry season they ought to be watered every evening.

I find that vegetable and flower seeds generally ought not to be sown in too rich ground, and much mischief arises by transplanting from a rich plant-bed to a poor soil.—Young vegetable and flower plants had better be watered with the solution of cow-dung, the latter must be put in a barrel which is to be filled with water, and suffered to stand until the fermentation has subsided.

Georginas, (*Dahlias*) after they are sufficiently large for transplanting, ought to be put in a rich spot and watered at least once a week with the above solution, and when they get large enough fasten them to small stakes; in the winter they ought to be covered with earth as high as our common potato hills.

We have the finest prospects for a good fruit season I ever witnessed in this country, even my apricot trees are loaded.

Yours, very respectfully,

CHRISTIAN BREIGHTHAUPT.

ART. XLII.—*Notice of the Floral Exhibition of the Horticultural Society of Charleston; by the EDITOR.*

The first spring exhibition of the Charleston Horticultural Society, took place at the Academy of Fine Arts, in this city, on Thursday and Friday the 25th and 26th of April last. The room being previously occupied by pictures, which were then being exhibited, the Committee of the Society, determined to unite the two exhibitions, and accordingly entered into arrangements with the proprietor of the pictures for that purpose. The room is lofty, but not very large, and as the sides were already occupied, a large pyramid was erected in the centre of the room, with numerous ranges of shelves, on which were tastefully arranged, the various plants sent for exhibition.

On the top of the pyramid stood a large and beautiful plant of the *Ficus elastica*, whilst other highly ornamental plants were ranged on the shelves immediately below, conspicuous among which, were the *Linodorum tankervilleæ*, *Amaryllis Johnsoniæ*, and numerous fine specimens of geraniums. The Roses were in abundance, and numerous varieties were exhibited both in vases and boquets. The cut flowers were numerous, principally formed into boquets, and ranged on the lowest shelf where they could readily be seen by all; among these the *Rhododendron ponticum* was conspicuous, and excited much attention. It was deservedly praised by all, and a premium was awarded to Mr. Patterson, for it. The *Azalea coccinea*, an indigenous plant (from Georgia,) was also much admired, and took a premium. The *Prince George* geranium from the garden of Mrs. Wagner, was truly most beautiful, it was in full bloom and was very conspicuous on the shelf where it was placed. Nor must we omit to mention the numerous seedling geraniums furnished by Mrs. Schriver. Out of twenty-one large plants sent by her, more than half were seedlings, each conspicuous for its beauty, and one "*The Charleston Belle*," remarkable not only for its fine foliage and flowers, but for the manner in which they were produced. The boquets and vases of flowers were truly splendid, and it was extremely difficult to determine to which to award

the premium, and the committee at length determined in favour of that which contained the most numerous specimens of exotics. Not having taken notes at the time, and being otherwise much occupied, we are unable to enter into as minute a detail as we could have wished, and we are conscious that there were many very beautiful plants in the room which we have not mentioned.

The Society were particularly indebted to the following ladies and gentlemen for the contributions which they furnished, viz. Mrs. Bentham, Mrs. William Johnson, Mrs. Dehon, Mrs. Cochran, Miss Stone, Miss Mooney, Mrs. Schreiver, Mrs. Davis, Mrs. Wagner, Messrs. Noisette, Baker, D. C. Webb, R. Landreth, F. Dupont, S. Patterson, James Legare, J. Nicholson, J. A. Winthrop, and J. Michel.

The company commenced arriving before the doors were opened, and continued to arrive in large numbers throughout the two days it was open for exhibition. At night the hall was brilliantly illuminated, but being otherwise engaged, we did not attend, and cannot speak of the effect produced. We understand, however, that the company expressed themselves highly pleased. On the whole, we have every reason to be gratified at this exhibition. There were nearly twice the number of plants and flowers exhibited at this, as at the best of the exhibitions which took place during the last year, thus evincing a decided and growing taste for such pursuits. We subjoin the report of the committee.

"The Committee appointed by the Horticultural Society, to make arrangements for the exhibition of flowers, and flowering shrubs, directed by the rules of the Society to take place in the month of April, beg leave to report that they have performed the duty assigned them, by making an agreement with Mr. Warrell, to unite the exhibition of Flowers with that of the Pictures, which at that time ornamented the walls of the Academy.

A pyramid was constructed in the middle of the room, and the plants tastefully arranged on the stages, the contributions were numerous and displayed the increasing taste for the culture of Plants and Flowers.

Mr. Noisette furnished a large collection of choice plants, among which were distinguished so many of the *Linodorum tonkervillæ*, that the Committee adjudged him the premium, for the handsomest exotic plant.

Mrs. Schreiver contributed to the exhibition so great a variety of beautiful geraniums, and her seedling plants were so numerous and thriving, that the Committee were unanimously of opinion that Mrs. Schreiver is entitled to an honorary premium, for the skill and persevering industry she has exercised in rearing these plants.

To Mrs. Wagner, already so advantageously known to the Society for her taste and skill as a florist, the Committee awarded the premium for the *Ranunculuses*. The numerous specimens of this choice flower exhibited by Mrs. Wagner were very large, and brilliantly coloured.

The Committee awarded the premium to Mr. James Legare for the finest indigenous plant, his specimen of *Azalea coccinea*, being the finest of that description in the exhibition.

Mr. Samuel Patterson, who contributed largely to the exhibition, a premium for the *Rhododendron ponticum*.

To Mr. Dupont, the premium for the finest exotic bulbs, his *Amaryllis Johnsoniensis*, being the finest exhibited on this occasion.

The Society offered a premium for five varieties of Roses, a much greater number were presented from the garden of Miss Stone, and the Committee decided unanimously, that this lady was entitled to the premium, as well as to the thanks of the Society, for the large collection of choice plants contributed to the exhibition, from her garden and green-house.

The Committee found it extremely difficult to decide which of the numerous bouquets of flowers were entitled to a preference; they all displayed great skill and taste in the cultivators, and, for the season, presented a great variety of choice and beautiful flowers. The three most beautiful were from the gardens of William Johnson, Miss Stone, and Mrs. Cochran, and the Committee awarded the premium to the latter, for containing a greater profusion of exotic flowers, the introduction of which will add so much to the beauty of our gardens.

The Committee have further to acknowledge the contributions in valuable plants and choice flowers, made to the exhibition by Mrs. Dehon, Mrs. Bentham, Mrs. Davis, Miss Mooney, Mr. Webb, Mr. Michel, Mr. Winthrop, and Mr. Landreth.

All which is respectfully submitted, by

J. R. POINSETT,
JOSEPH A. WINTHROP, } Committee."
J. D. LEGARE,

ART. XLIII.—*On Raising Olive Trees from Seed; by B.*

In your account of the estate of J. Hamilton Couper, Esq. you state that he is the only person who has succeeded in rearing olive trees—seedlings. If you will ask Mr. J. H. Mey, he will give you an account of his own practice in the culture of this tree.

He gathers the fruit at maturity, when black—steeps them in ley-water which prepares them for the removal of the pulp. The pulp is cleaned as perfectly as possible from the seed or kernel. The kernels are put into a jar, and this jar, *uncovered*, is buried one foot under ground until the first of February, when it is necessary to dig them up and set them out. They germinate so readily in this way that the only danger arises from the postponement of planting out the kernels in February, the sprout is very brittle, and if care be not taken, is liable to snap off, unless you get before-hand with them; these trees bear our severest winters, and on that account are more likely to reward the cultivator than orange groves, which in hard winters die.

I remain, your's, &c.

B.

Note.—Our correspondent has committed two mistakes, which although unimportant, it is as well to have corrected—the first is, in saying that in our account of the estate of J. Hamilton Couper, Esq. we stated “that he was the only person who had raised seedling olive trees.” It is Mr. John Couper, sen. who has succeeded, and our correspondent will find on again perusing our article, that we were giving an account of St. Simons’ Island, and of his plantation. The second is that we stated that he was the *only person* who had raised “olive trees—seedlings.” The omission of a few words alters our meaning, we did not intend to affirm, that no other olive trees had been raised from seeds in the Southern States, but merely that this was the only instance known to us. We thank ‘B,’ however for the information conveyed in his note.—*Ed. So. Agr.*

ART. XLIV.—*Account of the production of Cotton in Hinds County, Mississippi; by M. W. P.*

Extract of a letter to the Editor—dated March 19, 1833.

* * * * *

You are incredulous in South-Carolina about the cotton crops produced here, and I am not surprised, a man who has seen no other cotton country but Fairfield, Chester, York, Union, Newberry, &c. cannot be impressed with the fact that we can and do make two thousand pounds, and upwards, of seed-cotton to the acre. I do not say this is an average crop, but I have made a little the rise of two thousand pounds to an acre the past season in my best land, and can do it any year, except very wet indeed.

I have known in my neighbourhood, as many as nineteen bales made with three hands, and corn also. This was gathered before the first of January.

I commenced picking on the twenty-fifth of August last and finished on the first day of December. My hands made no large pickings, owing to our being able to keep near with the opening; nor did I make as many bales to the hand as I did the year preceding. Too dry for upland. My upland averaged upwards of nine hundred pounds to the acre; of a seasonable year I would not pay much for the insurance of a bale to the acre. My best land, though not low ground, will bring from eighteen to twenty-two hundred per acre of a fair seasonable year. I have never been able to get in a full crop yet; the first year I had in about six acres to the hand, last year only about five acres to the hand—of cotton I mean.

One of my hands has gathered as high as two hundred and fifty pounds of cotton, and never gathered that amount all his life previous to the season of 1831; the sixteenth day of 1831, he gathered that. Last year he did not gather more than one hundred and sixty-five, but was detained about house for a short time in the mornings attending to cows; one of my boys picked one hundred and forty pounds next to last day of picking.

* * * * *

M. W. P.

PART II.

SELECTIONS.

ART. XXXIX.—*Neat Cattle.*

[From a very long article on "Neat Cattle," in the *Library of Agricultural and Horticultural Knowledge*, we select the following sections, relating to the Bull, Cow, Calf, and Ox. The whole article is good, but it is too long and there is too much in it which would prove uninteresting to the generality of our readers, to copy it entire in our Journal.]—*Ed. So. Agr.*

Bull.—The object of the breeder must always govern the description of bull required, but to arrive at excellence, there is one form essential to all, and which is described by Culley, as follows:—The head of the bull should be rather long, and muzzle fine; his eyes lively and prominent, his ears long and thin, his horns white, his neck rising with a gentle curve from the shoulders, and small and fine where it joins the head; his shoulders moderately broad at the top, joining full to his chine and chest, backwards, and to the neck vein backwards; his bosom open, breast broad and projecting well before his legs; his arms or fore-thighs muscular and tapering to the knee; his legs straight, clean, and very fine bone; his chine and chest so full as to leave no hollows behind the shoulders; the plates strong to keep his belly from sinking below the level of his breast; his back or loin, broad, straight, and flat; his ribs rising one above another in such manner that the last rib shall be rather the highest, leaving a small space to the hips or huckles, the whole forming a round or barrel-like carcase; his hips should be wide placed, rounder, globular, and a little higher than the back; the quarters, from the hip to the rump, long, and instead of being square, as recommended by some, they should taper gradually from the hips backwards, and the turls or pot bones not in the least protuberant; rumps close to the tail; the tail broad, well haired, and set on so high as to be in the same horizontal line with the back.

A bull is in possession of his generative powers, and is competent to be used with two years-old heifers at fifteen months;

but it is not advisable to permit him to cohabit with large cows, until he is arrived at a greater strength. It is proved by practice that the produce of a bull of fifteen months is equally stout and healthy as that produced from a bull of a greater age. To a young bull we would not advise more than ten or twelve heifers; but the numbers increased till he is four years old, at which age the bull may be considered in possession of his greatest powers. The cow and ox attain their full age at seven years. Bulls, when let loose with cows are very much in the habit of not confining themselves to those allotted to their charge, but roam away and visit others; to prevent this they are by some breeders tied up in a pen or stall, and fed during the summer on cut grass, clover, or any other green food, and in winter on hay. When required they are let out to the cows. Others let them run with the cows throughout the year, and some work them with the oxen, but the latter is by no means recommended, as the bulls are generally vicious with oxen, and generally do mischief by goring them. The working of a well-trained bull, however, may be found advantageous on a small farm, where his labour is of consideration.

Cow.—The cows which produce large quantities of milk, do not generally keep themselves in the same condition as others that produce but little. But this is not, as some suppose, a proof that the one does not fatten equally as fast as the other when dry. When both are in milk, the food which is eaten by the cow that gives the greatest quantity, is converted in a degree to the production of milk, while the food of the other is appropriated to the laying on of flesh.

While agriculturists have devoted their attention to improving the symmetry of their stocks, the form of milch cows seem to have been altogether neglected. Those who breed for dairy purposes, are usually, neglectful of the shape or inclination to feed, and breed from the best milkers, although there is no possible reason why both might not be united.

When heifers are permitted to run with the bull, they often conceive at the age of twelve or fifteen months; but it is by no means advisable, as it frequently injures the growth of the heifers, and are often lost in producing the calf, when so young. It is not desirable to let them produce a calf, till they are three years old. In dairy countries they prefer the heifers which produce calves at two years old, under the impression that they make better milkers.

The term of gestation is nine months; sometimes it may be a few days before or after. The time of taking the bull should be about May, that the calves may drop about February. The date should be remembered by the breeder, that he may have no difficulty in affixing the period of delivery, and taking the neces-

sary precautions; generally the cow conceives after once taking the bull, but should she fail, she should be taken to the bull again as soon as the symptom again return. She should be kept separate from the other cows during that day and night, that she may not be disturbed, as cows will frequently afterwards ride one another, and are liable to sustain injury. Although artificial means have been used to bring a cow into season, it is much to be reprobated, since nature's laws, cannot, without injury, be altered; and by such subversion, the result is not profitable. The time may always be known by her restlessness, by her riding on other cattle, and by the inflamed appearance of the external parts, accompanied by a discharge from the vagina. These symptoms seldom remain more than a day and night, sometimes not so long, and do not return till about three weeks; and when conception has taken place they disappear. After three or four months, cows may be ascertained to be in calf by pressing the hand on the off-flank, as when that is the case, the calf is found to strike against it. They are also known to be near calving by their springing at the udder and bearing, the former becoming more fully distended with fluid, while the latter is larger and more swelled. In heifers or young cows with the first calf, the udder will extend two or three months previous to calving, while older cows seldom spring the milk more than three weeks or a month previous to calving.

Cows are very subject to abortion during gestation, to avoid which they should be prevented from exertion in leaping, or other dangerous exercise, or being turned with any strange cows. In winter, when kept in the yards or closes, and fed in cribs, care should be taken that the cribs are kept nearly full of litter, or the bottoms raised so as to prevent the cattle injuring themselves by straining in reaching after their food. Abortion is frequently produced in a wet season by the heifers and cows being kept out late in the autumn on grass, without dry food such as hay or straw, being given to counteract the two great proportion of fluid taken up by the animal in grazing, which has been found by experience to be very injurious, and has often when it has not produced abortion caused the calf to be dropsical.

When the cow is about half gone with calf it should not be fed on grains, turnips or other succulent food, unless accompanied with some dry fodder, as hay, straw, &c.; neither should be turned out to grass when the season is far advanced or the pasture very moist. During the whole of the parturient it will be advisable not to keep the animal in too high a condition on account of their greater liability to inflammation after calving. With respect to the proper time for drying off the cow previous to the period of calving, we should advise an interval of three months at least, for so long as their is a drain from the cow,

she is necessarily kept in low condition, and especially as she draws near the time of parturition, for she then has to supply the calf within her with nourishment, as well as her keeper with milk. But it is the practice with milkmen not to let the cow dry until within a week or fortnight of the time of calving; but then the cows are well fed. We should certainly not recommend this practice, as it must be injurious to the dam and the young.

“The symptoms of calving are distention or springing of the udder, and gradual yielding of the ligaments of the couples or rump bones, which are generally perceptible about a fortnight before the cow is at her full time; when that arrives, it is marked first by a slight elevation of the tail, and then by general uneasiness until the pains commence.”

If the cow should be so much exhausted in calving, that the throes are not sufficient to produce the birth, she should occasionally have a drink of two or three quarts of gruel and a pint of ale, which will give her strength to make further efforts to get rid of the calf, and will also assist the operation. Cows generally calve in a recumbent posture, and care should be taken that the place where they lie down is not on a steep descent, for in that case, the calf is apt to be brought prematurely forward, and by the straining and irritation, it produces a tedious, and sometimes dangerous calving.

During the day and night after calving, the cow should be kept in-doors and supplied with luke-warm water for drink, or a bran mash; but if the cow is very weak, a malt mash should be given, which will prove nourishing, and may be repeated the following day if necessary. She should not be turned out for a few nights after calving, but should be kept in the stall and from cold water, as the application of cold has a tendency to produce inflammation.

Should the fœtus be in an unnatural position the cow must be assisted, but by no means should any force be used, only at that period when the pains are on. In cases of cows slipping their calves, the greatest attention is required and the utmost cleanliness observed; it is sometimes caused by ill treatment, turning strange cows with them, but more frequently from grazing in autumn on wet land, without having hay to counteract the effects of the fluid taken up by the animal. As cows are very subject to abortion when feeding on succulent plants, such as mangold wurzel, turnips, &c. or even wet grass, they should be occasionally bled, which is considered to act upon them as a preventive. Should a cow sink her calf within three or four months of the calving, she should, if in milk, by all means to be kept on milking and when the regular time of calving is arrived, the milk will flow nearly in as great a quantity as if a natural birth had taken place. The cows which have been effected with abortion,

should be permitted to be in the company of breeding cows as little as possible, neither should barren cows, as both will disturb the quietude of the others, and probably cause abortion in some of them. It is a singular fact respecting the slinking of calves, that cows never thrive well where they are in the habit of inhaling the effluvia arising from dunghills, or the refuse of slaughter-houses, which, of course, should be removed, and especially the latter, as many instances have come to our knowledge, of abortion occurring year after year, in the same situation, in consequence of the cause not being suspected in the first instance.

To assist the after birth, as it is termed, it is recommended to give the cow the following drink:—"let about three quarts of milk simmer over the fire, and when warm, strew in as much oatmeal as will be sufficient to make a strong gruel, carefully stirring the whole till it boils, that no lumps may arise, then add one quart of ale (or two of table beer,) and one pound of treacle, and carefully incorporate the different ingredients by stirring. This mixture should be given lukewarm. It is peculiarly grateful to cows, which they will drink eagerly after the first hornful, and is considered useful as regulating the state of the body. This latter object, however, may be effected by giving a warm bran mash; but this treatment only applies to animals that are housed.

It not unfrequently happens that the milk flows into the udders of cows in so great proportions before the calving, as to render it peremptory that part of it should be drawn off to prevent inflammation of the udder; this should be carefully done by taking only as small a quantity as may be necessary to lessen the distention, and give the desired relief once a day, the necessity of adopting that course being generally shown by the continual dropping of the milk. Immediately after calving, the calf should be allowed to suck as long as he is willing, or until the udder is relieved from the impurities excited by the undue course of nature; but should any lumps or cores remain, it will then be necessary to have the udder well drained night and morning, and frictions by the hand (previously anointed with elder-flower ointment) persevering applied two or three times a day; by these means suppuration of the udder and the destruction of the speens, will be prevented, which is always a serious injury, completely obviated. If a *prolapsus reteri* has once occurred the cow should never be allowed to take the bull again; but in ordinary cases she may be put to the bull in four or five weeks from the time of calving.

(To be continued.)

ART. XL. — *On Gardening—No. 1*; by ALEXANDER GORDON.

[FROM THE GENESEE FARMER.]

The period is now fast approaching, when the rigours of winter will be succeeded by returning spring—when vegetation will again display its beauties, and our gardens and our fields be clothed with their luxuriant mantles. Flora will again invite us to examine her beauties and admire her diversified charms, rewarding us, for this tribute of our admiration, with health, repose of mind, and a calm solace amid the multifarious cares of this sublunary world. These are gratifications within the reach of every individual who possesses a garden, and in this free and happy country there are but few who, from necessity, are deprived of this source of varied pleasure. These inducements alone might entice man to seek for enjoyment during his leisure hours, amid the attractions and innumerable beauties of a well cultivated garden. But these form only a part of the many advantages which result from this delightful recreation, independent of the garden being a source of delight and comfort. The products of a kitchen garden form important articles in the food of man for all ranks of society; furnishing the tables of the rich with luxuries, and the poor with a great part of their support; and I will ask, where is the individual, whether rich or poor, who will not eat with a greater relish the vegetable reared in his own garden, and nurtured under his own immediate care, than he would such as he might purchase at market, or receive as a gift from a friend? There is a heartfelt satisfaction in saying, “This is the produce of *my own garden*.” What a variety of pleasing associations will accompany the remark. Every anxious look which watched its progress—every fostering care which we awarded to it will occur to our recollection, and fill our hearts with a benign satisfaction, and with sensations which those alone can appreciate who have tasted the pleasures and drank from this source of intellectual gratification. But the pleasures attendant on the cultivation of a garden have been so recently laid before the readers of the “*Genesee Farmer*,”* in a manner which render any further observations of mine necessary. Than the writer of that article, none are more competent to describe the diversified charms and the pleasures of a garden—with a mind well calculated to appreciate its every beauty and every benefit—with a heart warmly devoted to the interests of rural economy—with opportunities which afford him every facility to investigate the laws and beauties of nature, and with a disposition ardently desirous to benefit mankind at large by the results of his investigations and laudable exertions, he is placing his country under a

* See Vol. iii. page 37.

deep debt of gratitude; but he finds his reward in the approbation of his own benevolent heart.

In a publication such as the *Genesee Farmer*, the readers of which look to its pages for much of their information on agricultural and horticultural subjects, it must be highly advantageous that this information appear at due season—that assume a tangible shape, and be reduced to something like a system, otherwise the matter, however, useful, will be disjointed, and published frequently at a season inappropriate for its execution. Information which is read immediately before the operations on which it treats ought to be performed, is likely to be attended with a double advantage; it not only directs our attention to the manner of performing the operation, but acts as a stimulus to undertake them.

I propose to furnish for several successive numbers of the *Farmer*, some general observations on the different branches of gardening; and I shall use my endeavours to give such directions and information as will enable every farmer to combine in his garden the ornamental with the useful. But in conveying information on such a variety of subjects as this will naturally embrace, the different articles under each must necessarily receive but a brief notice; still I hope to render them sufficiently explicit, that they shall be of considerable benefit to the uninitiated, and probably some assistance to the more proficient in the art.

Kitchen Garden.—On the formation of Kitchen Gardens.— In fixing upon a site for a kitchen garden, it should be placed as near the house and stable yard as is consistent with beauty, convenience and other arrangements: for a kitchen garden may be made as agreeable and as interesting a scene as any part of the residence. A kitchen garden should never be laid out in an irregular manner, for as it is the most *useful*, it may be made equally agreeable with the pleasure ground and flower garden. Symmetry, due proportion of the walks, borders and compartments according to the extent, must be in the first place well considered; next, convenience for executing all the operations required to be carried on, placing the fruit trees, large and small, at proper distances, according to their respective growths; in short, combining all the principal objects and features in such order that there may be full scope for the cultivation of the larger crops, and subdivisions enough for the smaller. The form of a kitchen garden should, if possible, be either a square or oblong; all gardeners agree in this being decidedly the most convenient for a garden. With regard to its natural situation, a gentle declivity towards the south, and if a little inclining to the east so much the better, is decidedly the best. All low situations and bottoms of valleys ought to be avoided. A medium altitude is the most desirable. In laying out the area, or space inclosed, a

walk should be carried round the whole at such a distance from the fence as will leave a proportionate border to the extent of the garden. The walks must be ruled by the same principle. Two other walks, if the garden exceeds a quarter of an acre in extent, should be laid through the centre from north to south and from east to west, crossing each other at right angles—which will give a border all round the garden, and four grand divisions in the centre. With these brief hints, I proceed to the practical part of the gardening operations.*

In the ground department of the kitchen garden, no operations can be performed during this inclement weather, but every preparation should be made that no delay may take place when the weather admits. But as respects forcing, or accelerating desirable fruits or vegetables in their maturation, or forwarding others some stages in their growths, this is the time to prepare the materials for that purpose. Horse manure from the stable yard is generally preferred, but it must undergo a degree of fermentation before it is formed into a bed. The object of this fermentation is to get rid of the violent heat and rancid gases.—The method adapted for this purpose is, to form the manure into ridges of a considerable size, and turn it frequently over. Air and moisture being requisite for this purpose, should the manure become too dry, it must be watered as it is turned over during the fermenting process. Two or three weeks will be quite sufficient for every purpose, if the manure is turned over three or four times during that period. Care must be taken to exclude the rain, if it is likely to impede the process of fermentation. The quantity required will depend for what purpose it is intended. For forcing cucumbers and melons, glazed lights with frames will be absolutely necessary at this early season; but for rearing radishes, cauliflower plants, cabbage plants, lettuce plants, &c. a more temporary concern will answer the purpose. But this must be explained in next week's paper.

I am very respectfully,

ALEXANDER GORDON.

Rochester Nursery, Main-street, March 12, 1833.

* As regards the formation and planting a flower garden, I beg the reader's attention to that subject, which I have explained more fully in the 2d vol. pp. 354, 361, 362, of the Farmer.

ART. XLI.—*On the Natural History and Cultivation of the Striped Housainée Persian Melon*; by G. I. T.

[FROM THE HORTICULTURAL REGISTER.]

First Paper.—This is a subject of peculiar interest to me, and it is my earnest desire to render it the same to others; for the fruit in question, well deserves the utmost attention that can, by any possibility, be bestowed upon it. Before, however, I enter upon the particular description of this individual variety of the melon, I conceive I shall be doing your readers some service by soliciting their attention to the character of the family to which it belongs; and here I take the liberty of suggesting, that much important information would be afforded, were writers upon horticultural subjects, to seize every favourable opportunity of conveying elementary instruction, concerning the botanical character and natural habits of the plants upon which they write. Our knowledge, or rather conduct, has heretofore been too empirical; we have taken things for granted, merely because our own practice, or that of our preneccessors has been productive of certain specific results. But in the present day, when science is spreading in every direction, and men of all ranks are seeking for a knowledge of *causes*, while they observe *effects*, it becomes us not to rest satisfied, until we can trace every subject (that is deemed worthy of inquiry at all) to its fountain head.

In order to set an example of that mode of conveying instruction, which I recommend to the consideration of others, I shall commence this article by an inquiry into the origin and meaning of the botanical name, bestowed upon this family of plants: in the next place, I shall add a slight sketch of the character of the *Genus*, and of the *species* to which the individual variety belongs. This will lead me to notice very particularly, the natural habits of the interesting tribe, lately introduced by Persia, among which the *Housainée* melon stands very conspicuous; if not pre-eminent. A *second Paper* will contain a detail of an experiment, wherein many of the facts adduced in this first paper will be elucidated and confirmed.

The *Melon*, according to Loudon's Encyclopædia, No. 4869, has been known in England, since the year 1570, and it appears to have been originally brought from Jamaica. The varieties in common cultivation formerly known by the title of *Musk Melons*, have usually been considered natives of Southern Europe: they are numerous, and Loudon's Catalogue mentions and describes nineteen; but the sub-varieties and intermixtures from crossings, are almost unlimited. In fact, there is reason to believe, that if melons of several varieties be grown in one department, not only will the seeds of each fruit be more or less contaminated, but those taken from the same individual melon will

be found to produce plants, whose fruit may differ very considerably in appearance and character.

The *Melon* is a species of the *genus* or family *Cucumis*, or Cucumber. This term is derived from *Κεκυμαι kekumai*, it indicates a swelling or tumidity, and to no fruit can it be more appropriate, than to the cucumber and melon. The name of *Melon* (*Melo*, latin) is derived from the greek noun *Μηλον Melon*, whence *Malon*, (and *Malum*, latin) an apple. *Cucumis Melo*, therefore, may literally be translated the *Apple cucumber*, and with some propriety, because the fruit approaches towards the figure of an apple. But its chief and particular resemblance may be referred to the odor which it emits: in fact, so closely does the specific aroma of many melons approach to that of the apple, that persons may be deceived who are not aware of the exact situation of each.

The *Genus* or family *Cucumis*, belongs to the subclass *Calycifloræ* of the Jussieuean, or natural system; this division contains plants, whose petals (or flowers proper) are separate from and inserted into the *Calyx*, or external cup; and whose stamens are perigynous, or distinct from the *Corolla* and inserted in the *Calyx*; and to the order *Cucurbitaceæ*, that is to say, it one of a tribe of plants whose natural character closely, or more or less resembles that of the Goard, (*Cucurbita*.)

In the Linnean system, the genus *Cucumis* is found in the twenty-first class *Monœcia*, and eighth order *Monadelphîa*. The compound word *Monœcia* is derived from the greek words *Monos*, one and *Oikos* a house: the class includes those families which have distinct male and female blossoms, but still growing on the same individual plants. The term *Monadelphîa* from *Monos*, one and *adelphos*, a brother, expresses a peculiar structure or arrangement of the stamens or male organs; whereby they are (however numerous, may be the anthers or tips) united at their base, so that they may be detached and removed in one entire body from the flower.

The generic character of this genus *Cucumis*, is described as consisting of two distinct species of blossoms. The male flower has a five-toothed *calyx* (flower-cup) a bell-shaped *corolla* of one petal, divided into five parts to a considerable depth, and three stamina more or less united.

The female or fructiferous flower resembles the male in most particulars; but in lieu of the stamens, it has a three cleft pistil or central column, and a swollen roundish, oval, or very long germen below the blossom, which crowns and terminates it at the apex. This germen becomes the future fruit. The female does not contain stamens and anthers properly so considered. Nevertheless, I have frequently remarked in the melon, at least, three or four processes closely resembling anthers, that surround the pistil near its summit, and which, I am inclined to think,

partake somewhat of the character of true anthers, and may, perhaps, act as efficient organs of impregnation.

The *Housainée*, or Hoosainee melon, is one of those extraordinary varieties, which have of late years been introduced from Persia. Of these the Encyclopædia of gardening makes mention of two only, viz: 1st, the *Dampsha*, the distinguishing feature of which is, that, if kept in a dark room, it will remain good during the winter months.

2nd. The *sweet Melon of Ispahan*: this is a large and very peculiar fruit, somewhat resembling in figure, a large swollen cucumber; its skin is extremely delicate, pale sulphur yellow, smooth, or with very few vermicular reticulations, flesh white, flavour luscious, abounding with a rich saccharine juice. This Melon appears to be the peculiar favourite of Mr. Knight, the venerated President of the London Horticultural Society; and some idea of his successful method of cultivating it, may be gathered, by consulting pages 263 and 302 of your *Horticultural Register*. I too, have raised this variety, and ripened the fruit during the present summer; but I withhold any paper on the subject, till my experience be more certain and determinate.

The reader will perhaps be gratified by a reference to that useful work, *Lindley's Guide to the Orchard, &c.* wherein the distinctive qualities and natural habits of the Persian tribe are ably and clearly detailed. At page 235, Mr. Lindsley enumerates six varieties, and then observes, page 239, "The melons of Persia differ remarkably from the varieties commonly cultivated in Europe. They are altogether *destitute of the thick hard rind* which characterizes the latter, and which renders the one-half of every fruit useless; on the contrary, they are protected by a skin so thin and delicate, that they are subject to injury from causes which would produce no perceptible effect upon the melons of Europe. Their flesh is extremely tender, rich, and sweet, and flows copiously with a cool juice which renders them still more grateful. To these important qualities, they in many cases add the merit of bearing abundant crops of fruit, the appearance of which is always extremely beautiful." Further on, when describing the proper method of their successful culture *here*; and that pursued by the Persian gardener in their native climate, Mr. Lindley proceeds thus:—"They are found to require a very high temperature, a dry atmosphere, and an extremely humid soil; while they are at the same time impatient of an undue supply of moisture, which causes spotting and decay long before the fruit is matured. It is not easy, therefore, to maintain that necessary balance of heat and moisture which in Persia arises out of the very nature of the climate and mode of cultivation. In that country, we are told, that the melon is grown in open fields, intersected in every direction by small streams,

between which, lie elevated beds, richly manured with pigeons' dung. Upon these beds the melons are planted. The Persian gardener has, therefore, to guard against nothing but a scarcity of water, the rest is provided by his own favourable climate. With us, the atmosphere, the ventilation, the water, and the heat, are all artificial agents, operating in opposition to each other."

Having thus treated generally of the melon, and referred to such authorities as may tend to prepare the reader for what remains to be said on the habits and cultivation of this newly introduced tribe; I shall proceed to speak particularly of the most interesting variety, which will form the chief subject of the remaining part of this paper.

The *striped Housainée melon*, is to the present day, scarcely known in this country; in fact, it was not at all known, until Mr. Knight gave a description of it, in the Horticultural Transactions of 1831.

A melon, (No. 19, of Lindley's Catalogue,) termed the *Green Hoosainee*, is therein described as a handsome egg-shaped fruit, five inches long, and four inches in diameter, of a fine, even, bright green colour, rather yellow when ripe, and with greenish flesh; but this differs in many essential particulars, from the excellent variety that I shall now attempt to describe.

The striped Housainée melon is a noble fruit, one of great beauty and excellence: its skin is firm, but thin, the rind under it, and the fleshy cellular substance adjoining, to the depth of rather more than the eighth of an inch, is of a bright green, gradually becoming paler, till it meets and blends with the bulk of the flesh, which is of a pinkish buff or salmon colour; the green portion is not *quite* so tender and juicy as the internal substance; but the whole may be eaten so as to have nothing remaining but the thin exterior integument: there is no defraud in this fine fruit, all is juicy and eatable, the flavour is delicious, the odor that of a fragrant apple, and the fruit will long remain good without decay.

In its form this melon resembles an egg, the stalk-end being more enlarged than that of the blossom. It is, during its early growth, of a dark green colour, but as its age advances, the stripes become very apparent; they are of a full sombre green, and divide the surface into distinct marked portions, leaving it, however, perfectly free from grooves or furrows; and hence, this variety may be styled, a *smooth melon*, although it finally becomes reticulated with an ash-grey coloured net-work. When near to maturity, small greenish yellow spots are manifest among the interstices of the netting, and a clear yellow circle surrounds the part at the insertion of the footstalk. There is no determinate change of colour, that absolutely marks the state of perfect maturity, at least, I have not perceived such; the general tint appears to me to be a glaucous or sea-green, covered more or less with a

pale greyish tissue of vermicular resticulations. In some individuals, the green stripes remain very conspicuous to the last: in others, they become almost obliterated.

The *maturity of the fruit* upon a fine and healthy plant, is to be determined by the age, taken in connexion with the increase, *in intensity*, of the yellow in the circle round the stalk, the *softness* of that part, and perhaps, by the formation of a circular crack at the spot where the stalk joins the fruit. No distinctive *odor* is to be expected. If indeed, an accident cause *disease*, or the *death* of the plant, or if the leaves be broken so as to destroy their vital energy, the fruit will be arrested in its growth, and then, it will assume a suffused *yellowish tint*, and emit the odor of a melon. I had one fine fruit that enlarged with the utmost rapidity, till it weighed above five pounds; the leaves of the plant were then injured by an accident, so much so, that the plant became torpid. The fruit, from that moment ceased to enlarge, its tint changed, its substance became soft, and the odor of a melon was diffused; at the same time a still larger fruit that had begun to swell above ten days before, remained unchanged, and it continued to improve for above a fortnight, after the one injured was removed, neither varying considerably in its tint, nor giving out the slightest distinctive aroma. *Maturity* may however be ascertained by one circumstance, which (to adopt the expressive language of Mr. Knight,) will afford "an unerring induction of the time when the fruit ought to be cut. *Little globules*, apparently of water, *but really composed of the juice of the fruit*, appear at the junction of the fruit and its stalk. If such bubbles appear, and are *sweet to the taste*, the fruit should be instantly cut."

I have witnessed the correctness of these remarks, but may add, that in the largest specimen produced by me this summer, the oozing of saccharine matter took place *upon the stalk*, at a spot about half an inch above its insertion, and where it had become rather flaccid or withered: no odor was perceptible, nor could any other certain sign of ripeness be traced, although the fruit had remained upon the plant, fourteen days longer than another individual that was in the same department.

The *plant, in its habit of growth*, is one of the finest and most interesting objects imaginable. The stem, if led perpendicularly up to the height of three feet, will comprise about ten clear joints. From each joint, at its angle, a noble leaf nearly a foot in diameter is produced; it is supported by a *petiole* (footstalk) about ten inches in length, that takes a most graceful double bend, in figure resembling the branch of a chandelier. The plate of the leaf is of a most vivid green, its surface rough with short bristly hairs. In shape it is obtusely heart shaped, and very broad near the base. From the axils of these leaves, lateral shoots would naturally be sent forth, but each of these is to

be removed to a certain height, for a reason that will in due time be assigned.

The *flowers* both male and female are small, frequently not exceeding three-fourths of an inch in diameter, at the extreme edges of the *limbus* or border; they are of a sulphur or pale yellow colour, rather few in number. The males, as far as my observation extends, are produced somewhat before the fertile blossoms, and this appears to be a wise provision of nature, to insure the safety and perfection of the fruit; the melons formed *above* the tenth joint are generally found to set with greater certainty, and to grow to a greater size than others that appear during the infantile state of the plant, nearer to its roots.

"The *Housainée Melon*," as Mr. Knight justly observes, is upon the whole "of very easy culture," and the plant very productive of fruit; but "that it is very long in ripening." When ripe, however, he adds, "*it remains in perfection*, a very valuable quality to the fruiterer." Another feature, and one that he deems of great moment is, that "the natural habits of the plant, which he feared would not prove *permanent*, he has found to be strictly so." I have quoted his own words to me, merely changing the person, and I may add, that the only circumstance worthy of real regret is, that the fruit is not only tardy, but somewhat irregular in the period of its ripening. Mr. Knight, with every advantage of machinery and aspect, considers fifty days as the time required, if the weather be such as it was during a considerable part of July last, that is, deficient in sunshine, with cool nights, and frequent showers. But I have had fruit which remained from sixty to eighty-four days on the plants, without evincing any decisive signs of becoming too ripe. My aspect, however, is south-east; and hence, I lose the afternoon's sun. But although this irregularity is tantalizing, there is one positive quality that amply compensates for the apparent evil; the fruit never decays, bursts, nor becomes flavourless.

My paper has extended beyond the proper limits, and much remains to be said. This I must refer to a second article, when I shall endeavour by a recital of actual facts, deduced from experiment and observation, to render the method of successfully cultivating this elegant fruit, at once perfectly intelligible and easy.

G. I. T.

ART. XLII.—*On the Cultivation of Cellery*; by CONSTANTINE MACKAY.

[FROM THE LONDON HORTICULTURAL REGISTER]

Gentlemen,—Having been in the neighbourhood of Manchester for these two years past, and observing the Celery to be superior in quality to that grown in other parts where I have been, and likewise observing in one of the numbers of your Magazine, that you wished for an account of the Celery cultivated in the neighbourhood of Manchester, I am induced to send you the following.

My opinion is, the Celery that goes by the name of the Solid-Red, is a distinct variety from that which the London seedsmen send out under that name; and what appears a convincing proof it, is, the early crop that is sown in the month of February does not run to seed, as the other kind is liable to do.

The invariable method practised by the best growers about Manchester is, to sow the first crop on a small bed, of a size suitable for a one-light frame, prepared after the usual way, and when the young plants have attained sufficient strength for pricking out, there should be a bed prepared of the following compost; one half of rotten dung, the other of rich loam, well mixed together, made about six or seven inches in depth, upon a hard beaten surface, where it may receive the benefit of the sun; by which means, the plants acquire good roots, by not penetrating too deep into the earth. They are afterwards transplanted out in trenches of eighteen inches wide, taking out the soil to the depth of ten inches, and filling them up with rotten dung, so as to admit a covering of soil sufficient to prevent the air from injuring the roots; so that when they are planted, the trenches are level with the surface: by which means the plants acquire more strength than by being planted in hollow trenches, as practised by most gardeners. Great care should be used in taking up the plants, which should be done with a trowel, permitting as much earth to remain with the roots as possible, and planting them immediately into the dung, from eight to nine inches apart.

The ground most proper for planting Celery is a strong soil, having a clay bottom, whereby the plants are kept cooler than upon a sandy soil.

I am, gentlemen, your obedient humble servant,

CONSTANTINE MACKAY.

October 15, 1831.

ART. XLIII.—On Draining ; by B.

[FROM THE GENESEE FARMER.]

Draining constitutes an important operation in husbandry, and one in which we are lamentably deficient. Our wet grounds abound in the food of plants, and constitute some of our best lands when discretely husbanded. But in their natural state they will not produce healthy vegetation. The cultivated crops which we attempt to raise upon them, are inferior and sickly, and as mere pasture, the grasses are coarse, sedgy and indifferent. Infertility is caused by the exclusion from the soil of air and heat, the essential agents in decomposing the food, and in stimulating the growth of plants. Hence the accumulation of vegetable matter in swamps. Draining operates in several ways to induce fertility. By carrying off the water, the soil becomes loose and warm ; the food of plants is thereby rendered soluble ; stagnant air and stagnant water, alike deleterious to vegetable and animal vitality, are got rid of, and a salutary and necessary circulation is afforded to air and water in the soil.

Grounds are rendered wet and unproductive either by the accumulation or retention of surface waters, or by the supplies of springs, which rise from below the soil. The first are remedied by a main open drain, carried through the lowest part of the ground, and by lateral ones, cut diagonally or at right angles with the main one, in sufficient numbers to drain the ground. The width should correspond with the depth ; and the latter should in no case be less than two or three feet, and if practicable should terminate in the hard or subsoil. A drain three feet deep, four feet broad at top and one at bottom, exhibits good proportions. Lateral drains may be somewhat smaller. The earth taken from the drains should be thrown back and spread, or carted off, that the surface water may freely pass into them. If the earth is peaty, or what is turned muck, it affords an excellent dressing for uplands. It is soon converted into food for plants by its admixture with earths, particularly with sands. Care must be observed to keep the drains open, and to remove obstructions to the free passage of the water. An economical method of keeping drains in order is to practice what is called *scouring*. It is performed in the summer months, when showers have produced an abundant flow of water, by men commencing, with hoes and spades, at the upper end, and passing down in the drain, loosening or throwing out in the way, the earth and other obstructions which have accumulated there. The current, then, greatly facilitates the cleaning operation.

The business of ditching, like every other branch of labour, is improved by practice and by system. An experienced hand will not only perform more than one who is raw, but will perform it

much better. It is important to observe the slopes entire and unbroken. To do this successfully my practice is, in the first place to draw a line on the two exterior edges, and to cut the depth of the spade on these lines, in an angle of the intended slope. In the next place the operator takes a spit from the center, and so far from the outside, that the perpendicular cut shall not disturb the earth below the slope. When the center is thus thrown out, the face of the slope is then readily and symmetrically formed, and a second spit then taken from the centre as before, and the operation thus continued until the drain is finished. The price of a four feet drain varies from eighteen to fifty cents per rod, according to the soil, and the obstructions which are to be operated upon. The best season for cutting open drains is August and September, because there is generally less water then to encounter, and that the slopes have time to dry and consolidate before the frosts of winter. B.

ART. XLIV.—*On Grasses* ; by NORBORNE B. POWELL.

[FROM THE SOUTHEN PLANTER.]

“ Liberty, Talbot County, (Geo.) April 20, 1833.

Dear Sir,—An impression seems to prevail that those valuable grasses grown by the Northern farmers, will not succeed in Georgia; from the few experiments which I have made, I feel well assured, that it is an erroneous idea, and that the upper and middle regions of our State afford a soil and climate as congenial to the growth of the different varieties of grass as any portion of the Union.

I have a small lot of Egyptian grass upon which my brood mares and colts have wintered. They were taken off the 1st of March, it is now growing most luxuriantly, and in a few weeks will do to cut, making an excellent hay, this grass is a perennial and difficult to destroy, as stock are not very fond of it, they do not graze it so close as to prevent its growth. But the most valuable article to which we can direct our attention for the improvement of our pastures, our land, and our stock, is in my conception the red clover. It grows finely on our stiff mulatto land, and might be made a profitable and certain crop if sowed at the proper time. Our summers are so long and hot, and frequently dry, that unless vegetation of this description is well rooted, it

gets parched up, to guard against this evil, we should sow in autumn, say first of September, and before the warm weather sets in, it will have taken such deep root as not to be affected in the slightest degree. I have the red clover in my garden sufficiently tall for cutting, and would no doubt afford the second cutting by the first day of June. Nothing upon which the cow feeds seems to produce so great an influence upon the quality of the milk and butter as clover, it imparts a richness and flavour altogether superior to that obtained from cows that graze on poor spontaneous herbs: and it is said that one acre well set with clover, will keep half a dozen milch cows, I know of nothing that would yield so great a profit. Should these crude suggestions be deemed worth your care, give them a place in your valuable paper.

Your obedient servant,

NORBORNE B. POWELL.

ART. XLV.—*On Painting Houses*; by ROBERT R. HARDEN.

[FROM THE SOUTHERN PLANTER.]

“Starvation Farm, Feb. 12, 1833.

Sir,—We use paint on our wooden buildings with two objects: first, ornament; second, durability. Was oil used by itself, without any colouring matter, the wood would be made more durable than it is with paint; but as ornament is a considerable part of the objects of painting, and as the addition of paint to the oil, when properly prepared, does not very materially injure the preservative qualities of the oil, the ornamental effect of the colouring more than counterbalances the injury it does. Paint, when properly prepared, therefore, while it is highly ornamental to wooden buildings, so materially contributes towards their durability, that there is economy in using it. But as it is generally prepared, (I may say always,) the ornamental effect of it on the outside of buildings is made only temporary, and its preservative qualities wholly destroyed. It is only necessary to look at our quickly decaying wooden buildings, with the paint washed off more or less in different places, according as it is exposed to the sun and rain, to be satisfied that the expense of painting has added very little towards preserving the building; and whether a building looks better without paint, or with paint nearly all

washed off, with here and there a little remaining to show that it once was painted, taste must determine. If what I have stated be a fact, that paint, as mostly prepared, is of little of value, it will be well to look into the cause of it that the evil may be remedied; and if I give the correct cause, happily the evil is removed without expense or trouble; or rather, it is cheaper to paint well than in this defective manner. We have only to leave out the spirits of turpentine, and we will have good paint. Ask the painter why he adds it to the paint, and he will tell you, to make it dry quick. This is just the same as saying, to destroy the oil, which renders the paint useless. Now let us reason upon it and see if this is correct. If we pour oil on wood it soaks into it, and after it is all soaked up, if we apply more oil it will strike still deeper and soak up more; when it has penetrated sufficiently deep into the wood as to prevent moisture from rain, &c. penetrating as deep as itself, the wood is rendered very lasting. This would be the case if a building was simply covered with two coats of oil without paint. If we give it only one coat of oil, with a sufficient quantity of paint to give it colour, the wood would so quickly soak up the oil that the paint would be left a dry powder on the building, that would be easily rubbed or washed off. If we give it first a coat of oil with a little paint added to it, the oil soaks into the pores, another coat of oil with the proper quantity of paint, while the pores are filled with the recently put on or first coat, remains sufficiently long before the oil is soaked up by the pores, for a part of it to dry with the paint, which forms a permanent covering of paint. This is the advantage of giving two coats of paint; if the first coat was oil only, it would be better. When a house is thus painted, all the injury done by the paint is the oil which it retains and prevents from soaking into the wood, and this is in part, perhaps wholly, counterbalanced in forming a firm external covering which tends to exclude moisture; thus painted a building is preserved and ornamented. Now what will be the effect of adding spirits of turpentine to the oil? We know of nothing better calculated to destroy our intentions in the use both of the oil and paint than this addition of turpentine. Every housekeeper knows that if oil is on her floor, spirits of turpentine is the application to remove it. Every wash-woman knows that if oil is on her clothes turpentine is the application to remove it; and how does it remove it when the oil and turpentine are added together? A chemical union takes place and the qualities of both are destroyed, and although either the oil or turpentine by themselves when applied on wood would add to its durability, yet when added together the original quality of both are destroyed, and the application is useless, just as an acid and alkali, when mixed together, destroy the qualities of each other and the effect of neither remains. Now when a building is painted with two coats of paint to which spirits of turpentine is added, instead of

the first covering of oil (which has very little paint) being soaked up, and the second covering, as the pores are already fed, soaking up the oil so slow that a part of the oil may dry in the plant, thus making a firm coat of paint on the surface, which will exclude moisture and prevent the evaporation of the oil, thus making the wood almost as lasting as time, and the colour to remain as long as the wood lasts; what will be the effect of this addition of spirits of turpentine? The oil is decomposed, and instead of soaking into the wood and slowly drying in the paint to give a firm covering, it is quickly evaporated by the sun, the paint is left a useless powder on the wood; where it is not sheltered from the rain, it is soon washed away; and in places where it only gets wet without being washed off, as the qualities of the oil are destroyed, it retains moisture and hastens decay. We have only to go to a house which was painted white, and examine the somewhat sheltered spots where they get wet by showers, yet the rain does not beat upon them so as to wash off the paint, and scratch off the paint, and we will find the surface in a state of decay from the paint not excluding moisture but retaining it. When pine wood is painted it should more especially have only oil and paint without the spirits of turpentine, as there is in the wood turpentine sufficient to injure the oil. If we examine the shingles or weather-boarding of a house; we will find wherever there is a knot or *fat place*, there the oil is decomposed by the turpentine in the wood, and the paint destroyed, even where no spirits of turpentine was added to the paint.

Does not this truth, which I believe all will allow, that turpentine makes paint dry quick, prove that instead of soaking into the wood the oil is decomposed and evaporates, show the destructive effect of this addition of spirits of turpentine to paint, and although the inside painting of houses remains when turpentine has been added, yet it would be more durable if the turpentine were left out. The oldest paintings we have appear as warm and glowing as when first executed, while the paintings of the first masters of modern times are injured, mostly as I think by the free use of turpentine. The fine paintings even of Sir Joshua Reynolds are losing their beauty. By some it is supposed that the paints used now are not as good as they were in former days. 'Tis not the fault of the materials, but the preparation. Oil, for instance, and white lead are as good now as they ever were, and were they used without turpentine or any thing else, as the painters say to make them dry, (or as we say to decompose the oil and destroy it,) would last as long and be as good as they ever were. If we calculate the annual amount of money used in the purchase of turpentine, and to this add the amount of loss from the injury it does, we will find it an enormous expense. From such trials as I have made, I believe the oil of palma christi to be superior to flax-seed oil for preserving wood. If the two oils be put on wood, the palma christi oil will

be found much more difficult to remove by decomposing with turpentine, which is proof it will be most durable. Palma christi oil, when properly prepared by boiling, is as clear and good as cold pressed oil. A good acre of land will produce from twenty to thirty gallons of it. Planters who wish to paint their buildings, would be able to make the best of paint oil, but cultivating a few acres of it, and when durability more than ornament is the object, as in out-buildings, gates, &c. giving them two coats of palma christi oil, without paint, would have the desired effect. The posts of my pigeon house, which were dipped in hot palma christi oil before they were put in the ground, look like they would last for generations to come; while the posts about the yard, garden, &c. are considerably decayed. Was the exposed six or eight inches of shingles dipped in a hot pot of palma christi oil, the expense would be a trifle, and they would be very lasting. Some years ago, by neglect, a pot of oil, with which I was experimenting, was spoiled by burning; the roof the house was quite low, the building being deep in the hill side, I threw the oil on the house roof; in taking this house down a few days ago, these shingles were found as sound and clear of moss as when put on, while the others were much decayed. But the durability thus obtained would not be the only object; it is known that old shingles become covered with a kind of mossy growth; this growth is nearly as quick to take fire as spunk, the smallest spark that falls upon it when dry may take fire. Perhaps nine out of ten houses that take fire from sparks falling on the roof, do so from this mossy growth, which never is produced on wood that is oiled; were shingles dipped in hot oil before putting them up, it would be a preventative from fire from sparks. A few days ago, during almost a calm, at mid day, when only a few coals were in the fire place, my house roof was discovered to be on fire. As there was no ladder nor no way of getting at the fire, it seemed as though the house would burn down. A very strong man, however, by getting in the window of a house not far off, was able to deaden the fire a little by throwing water with great strength; some drops would reach the fire; thus some little time was given for reflection. A man of great muscular strength with a small hatchet commenced cutting through the ceiling and sheeting. The fire began to blaze, the wind began to rise, all hope of extinguishing the fire was gone: he had however cut a hole through, and was able to tear off the boards and put out the fire. These shingles, upon examination, were found sound, but they were covered with this mossy growth. A very small spark must have set it on fire, for upon trial it was found almost as quick to take as gunpowder. Had these shingles been dipped in oil before they were put on the house, I would have been safe from such an accident, not only now but for many years to come.

ROBERT R. HARDEN.

ART. XLVI.—*Rules for Travellers, and their Horses; by PINE KNOT.*

[FROM THE SOUTHERN PLANTER.]

1. In the first place, treat your horse like a sensible creature; (I have seen horses that had more intelligence than the dolts that rode them)—in correcting him address yourself to his understanding, and endeavour to convince him by reason. The *forcible* remedy comes with more power afterwards.

2. Never beat your horse without sufficient cause, as that irritates and spoils his temper. Gentle words to a horse's ear are like lumps of sugar to his mouth—they sweeten his disposition.

3. If your horse take a *scare*, as the best of horses sometimes will, don't thrust your spurs into his flanks or beat him over the head. Nobody knows a horse's reason for being frightened—he sees many things we little dream of. Balaam's horse (or mule, I forgot which,) saw an angel! other horses, for aught we know, may see as much.

4. If a horse stumbles, speak to him sharply, or give him a jerk or two with the bridle, just to apprise him he is watched, but do not strike him—it makes him stumble the worse.

5. A horse is fond of company. Therefore, when riding alone, you should talk, sing or whistle to him. If in Spanish, so much the better—most horses have an air for Spanish. (Horses procured from the Pony Club, probably understand Cherokee quite as well.)

6. Never carry liquor on your journey: a horse can't stand the smell of ardent spirits: I never knew a man who carried a tickler that had good horses—they invariably become wind broken, or foundered.

7. Don't start too soon in the morning. There is nothing gained in a long journey by hurrying away before breakfast. Let your beast have time to rest and fill himself before starting—he can then travel till night without another feed.

8. When your horse is full and stiff, as he will be in the morning or after eating, never ride out of a walk—towards evening, as he becomes empty, his pace may be accelerated without injury.

9. As nothing is gained by starting too soon in the morning, neither is any thing made by riding too late in the evening. Never ride after night when it can be avoided. A horse likes regular meals and regular sleep, as well as other honest creatures, and is entitled to them.

10. See after your horse yourself—see that he is well fed, watered, rubbed and lodged. Don't let him stand in the mud, nor on a plank floor, when it can be avoided. A dry dirt floor, with a plenty of clean straw over it, is the best bed for a horse.

11. Never ride your own horse, when you can borrow your friend's or neighbour's—especially if you want to travel fast. A horse that knows you, won't push himself like one that does not.

PINE KNOT.

PART III.

MISCELLANEOUS INTELLIGENCE.

The following Gentlemen were on Wednesday the 24th of April, elected Officers of the St. Paul's Agricultural Society.

F. Y. LEGARE, *President*,

EDWARD W. CLEMENT, *Vice-President*,

SAMUEL KING, *Secretary & Treasurer*.

Rice Machine.—"Strong & Moody's Huller, smutter and polisher of rice" is now in perfect operation at the old Hemp Mill. They clean fifty bushels of rice—containing the outer hull and inner, then coating, ready for domestic uses—in twelve hours. The rice with the hull on it is worth seventy-five or eighty cents per bushel, and its value is increased about fifty cents by cleaning. The work is done well, and it will save a frugal house wife much labour and time, and perchance not a little of that discordant family music—*Scolding*. A machine has started for Charleston, S. C., and we predict its importance to the rice planters will be almost inestimable. We should like to learn the particular history of the machine after it arrives there.—*Northampton Cou.*

Hints to Housewives.—Vessels intended to contain liquid of a higher temperature than the surrounding medium, and to keep that liquid as long as possible at the highest temperature, should be constructed of materials which are the worst radiators of heat. Thus, tea-urns and tea-pots are best adapted for their purpose when constructed of polished metal, and worst when constructed of black porcelain. A black porcelain tea-pot is the worst conceivable material for that vessel, for both its material and colour are good radiators of heat, and the liquid contained in it cools with the greatest possible rapidity. On the other hand, a bright metal tea-pot is best adapted for the purpose, because it is the worst radiator of heat, and therefore cools as slowly as possible. A polished silver or brass tea-urn is better adapted to retain the heat of the water than one of a dull brown colour, such as is most commonly used. A tin kettle retains the heat of water boiled in it more effectually, if it be kept clean and polished, than if it be allowed to collect the smoke and soot, to which it is exposed from the action of the fire. When coated with this, its surface becomes rough and black, and is a powerful radiator of heat. A set of polished fire-irons may remain for a long time in front of a hot fire, without receiving from it any increase of temperature beyond that of the chamber, because the heat radiated by the fire is all reflected by the polished surface of the irons, and none of it is absorbed; but if a set of rough, unpolished irons, were similarly placed, would become speedily so hot, that they could not be used without inconvenience. The polish of fire-irons is, therefore, not merely a matter of ornament, but of use and convenience. The rough, unpolished poker, sometimes used in a kitchen, becomes speedily so hot that it cannot be held without pain. A close stove, intended to warm apartments, should not have a polished surface, for in that case it is one of the worst radiators of heat, and nothing could be contrived less fit for the purpose to which it is applied. On the other hand,

a rough, unpolished surface of cast iron, is favourable to radiation, and a fire in such a stove will always produce a most powerful effect.—*Cabinet Cyclopædia—Dr. Lardner on Heat.*

The Art of Making Butter.—It being highly desirable that this very essential article in domestic economy, should be obtained of a uniform excellence, I think it very important that every dairy-woman should rigidly observe a few simple rules, which experience has taught me, will produce the desired effect. 1st. Let every thing relating to setting the milk for obtaining the cream, cream vessels, churn, &c. exhibit a pattern of the most perfect cleanliness. The length of time for the milk to stand must be determined by the state of the weather. 2d. Churn while the cream is perfectly sweet. 3d. Work out the buttermilk as much as possible, and to every pound of fresh butter add $1\frac{1}{4}$ ozs. sifted salt, either *ground rock* or *blown Liverpool*, (the former preferable,) and if desired to keep any length of time $\frac{1}{4}$ ounce of saltpetre should be added. After standing four and twenty hours, every extraneous particle should be worked out and the butter set away in a cool dry place, for full as much, and indeed almost every thing in regard to its keeping depends on having not only the buttermilk, but the watery part of the salt thoroughly extracted. With a strict attention to cleanliness in all its departments, and an adoption of these rules, any one may have as good butter one year old as one week old, provided there is nothing deleterious in the food of the cows. I think it is quite a mistake to suppose, that the *quantity* or *quality* of butter is improved by letting the cream sour. I know of no possible reason why all the nutritious flavour of the cream should pass off in the buttermilk; on the contrary, I know much of it remains in the butter, and can be agreeable to those palates only, that differ very much from that of

JEANNIE DEANS — *Maine Farmer.*

Colts.—To break him never strike, but often lead him by the side of another horse, with a bridle. When he walks well bring him to a trot after him; then lead him often in the saddle. Then put on a small weight, and gradually increase it. Then let one hold and another mount him, and ride after another horse in a ploughed field, till he learns the use of a bit, and will stop or go at your pleasure. By this easy method you will break your colt without breaking his spirit.—*N. E. Farmer.*

Breaking of Steers.—Yoke them carefully, and let them remain quiet until they will eat their food, which generally takes place in the course of one day. Yoke them again the next, and put them behind a pair of steady cattle and let them stand till they become familiar with them. This generally takes but one day. The day following yoke them again, and put them behind the oxen as before, put them upon the tongue of a cart or sled. They being now accustomed to the oxen before, they will readily follow without whipping or beating. They will soon become kind and gentle.—*Ibid.*

Strew Salt over your Asparagus Beds —The Asparagus is a native of the shores of the ocean, and will bear so much salt without being injured, that most of the weeds that infest the beds may be destroyed in this manner. But the application has other advantages; salt is a valuable manure; and it also repels insects by its pungency; for though we know of none that feeds on the Asparagus, there are many that would otherwise *poach* and lessen the fertility of the soil.—*Maine Farmer.*

Churning on Horseback.—We have just been told, by a gentleman who has travelled in South America, that the Indians near Buenos Ayres *churn their milk on horseback*. They have plenty of horses, and they are taught very early to ride with skill; so that when they wish to churn, they put their milk in a tin canister or any other convenient vessel, and taking it on horseback, gallop off several miles, till by the sound it makes in the churn, they know that

the butter has been separated from the buttermilk. Even little boys perform this service, for so well do they train their horses, that if the rider wishes to have his beast turn towards the right, he holds out his left hand, and presses the bridle rein gently against his neck; and if to the left, he holds out his right hand, and presses the right rein; the horse always turning in an opposite direction, as if to get away from his hand.

Our informant says, that on seeing a little Indian boy come galloping along one day with his churn, he asked him to stop, and inquired how far he had rode. He said about two leagues, (six miles.) On being asked how much farther he should go; he said about one more league. On opening the churn, the butter was already beginning to separate. Probably another league was sufficient to complete the process.—*Maine Farmer*.

Preserving Eggs.—In 1820, a tradesman of Paris asked permission of the prefect of police to sell, in the market, eggs that had been preserved a year in a composition, of which he kept the secret. More than 30,000 of these eggs were sold in the open market without any complaint being made, or any notice taken of them, when the Board of Health thought proper to examine them. They were found to be perfectly fresh, and could only be distinguished from others by a pulverous stratum of carbonate of lime, remarked by M. Cadet to be on the egg shell. This induced him to make experiments which ended in his discovering that they were preserved in highly saturated lime water. M. Cadet suggests adding a little saturated muriate of lime but gives no reason. They may also be preserved by immersing them twenty seconds in boiling water, and then keeping them well dried in fine sifted ashes; but this will give them a greyish green colour. The method of preserving them in lime water has been long the practice of Italy; they may be kept thus for two years. This useful mode is well known in many parts of England, and cannot be too much recommended.—*Mechanic's Magazine*.

Hawks to Frighten Birds.—A hawk, confined in a cage and placed in the garden or field, is found to be of more service to frighten away birds than other scare-crows, including a sleepy boy.—*Loudon's Gardener's Magazine*.

Hunting Bees.—The manner of hunting bees, as practised in the new settlements, may be familiar to many of the readers of the *Genesee Farmer*, but perhaps not to all. As advantage is taken of a peculiar instinct, it would, I think, be interesting to those unacquainted with it, to be informed of the process.

A tin box is provided, capable of containing about a pint. Into this is put a piece of dry honey comb; a bottle of honey and water, mixed about half and half, is also provided. The honey is diluted, in order that it may be more readily poured into the dry comb—that the bees may not be so liable to get it upon their wings, and will be able to fill themselves the more expeditiously. Apparatus for making a fire may also be necessary. With these, the hunter proceeds to a newly cleared field, at a distance from any hive of domestic bees, and having poured a little of the composition into the comb, he proceeds to search among the wild flowers for a bee. If one can be found, he is caught in the box by shutting the lid over him. As soon as he becomes still, the lid is carefully removed, when he will be found busily filling himself with honey. When he rises he must be watched, in order to ascertain his course. After making one or two circuits about the box, he will fly off in a straight course to his home. After an absence of a few minutes, say five or ten, he will return, bringing with him two or three of his companions. These will soon fill themselves, go home, and return again with a number more. Thus they will continue to increase in number, till in the course of half an hour there will be one hundred or more in the box. By that time the line will be ascertained with precision. The lid is now shut over as many as possible, and the box is removed on the line to the edge of the woods, where it is again opened. The line will soon be found at the new station as before, and thus the box is removed, from station to station, until the tree is either discovered or passed. If the

tree be passed, the line of course will be retrograde. A small pocket spy glass is a convenient thing for searching the tops of trees, as it requires a good eye to see a bee at that distance. If a bee cannot be found to commence operations with, a little honey is burnt on a stone, and if a wandering bee happens to be near, he will be attracted by the smell.

The proper time for hunting bees, is on a fair warm day in the month of September or October. During the Summer months, when food for bees is to be found every where, they will not *traverse*. If a bee-tree is in the neighbourhood of a sugar camp, bees will be found about the tree in the time of making sugar. They will traverse well in the spring. P.—*Gen. Far.*

Parsnips.—*Mr. Editor*—I have but little experience, and less skill in gardening; but I am willing you should have the benefit of what experience I have had. If all your readers would in this way give the results of their observations and experiments in farming and gardening, each one might then compare them with his own, and useful conclusions might be arrived at.

As this is the season of the year in which vegetables are generally scarce, it may be worth knowing, that the parsnip can be raised in plenty for spring use. Owing to the manner in which this vegetable is commonly raised in this climate, it is little esteemed. Where the winters are so mild as they are here, the parsnip keeps growing from the time it sprouts, until it goes to seed, so that when sown in March or April, as is the common practice, they become stringy and strong by winter, and unfit to eat. The better plan is, to sow but a small bed at a time, and at different seasons as you have recommended for Irish potatoes, by which means you may always have them young and tender. When wanted for spring use, the seeds must be sown in the fall—as the frost does not hurt them they will continue to grow all winter. I have had them fit to use for a month; some of them half as big as my wrist, and very sweet and tender.

Parsnips are raised with little trouble, and I have no doubt will be found a profitable crop. It is necessary to keep them clear of weeds; and when sown in the fall, the ground should be loosened the following spring with a spike hoe, or three tined fork. Parsnips are very fine for stock. Cows fed on them yield the richest milk in the world; and pork fattened on them is said to be superior to any other. P.—*Sou. Planter.*

A Striking Illustration of the Resources of Nature.—*Dear Sir*—One of my neighbours, in the fall and winter of 1831, was fattening a lot of hogs, when it happened, either from disease or indolence that one of them took a bed to himself during the coldest weather. The consequence was, that the skin and a stratum of fat beneath were frozen; and, in a certain length of time, disengaged from the animal, from the shoulders, leaving only a narrow strip along the belly and over the head and legs. This monstrous slough, if I may be allowed the expression, was detached with such rapidity as not to have time to undergo any process of putrefaction, and was as sound as if it had been taken off by the most skilful butcher. The farmer, perhaps, through curiosity, took it to the tanner, where it was pronounced to be a sound and good hide, and the last I heard of it, was that it was nearly ready for the saddler to work into horse collars, saddles, seats, &c.

The hog, as we would naturally suppose, if not complaining before the absorbents commenced their operations, would by this time find himself in a pitiful predicament. He, however, survived the operation; healthy inflammation came on; granulations shot up on all parts, and the last time I saw him (for I saw him divers times) both of his sides were completely healed and nicely haired over, and there only remained a narrow strip from the hips to the shoulders, which was beautifully bespangled with healthy granulations. I make no doubt that the hog before this time has had a complete skin.

This may be relied on as a matter of fact, I may state that it took place in Clinton County, Chester township, where the most positive proof can be had on the subject.

With due respect, &c. I subscribe myself thy friend, JESSE BURGESS.

Cincinnati. Jan. 25th, 1833.—N. E. Far.